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CONTENTS

END RESULTS IN ARTHROPLASTIES OF THE HIP*

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MEMPHIS, TENNESSEE

A report of the end results of arthroplasty of the hip was presented in 1926, at the request of the Program Committee of the American Orthopedic Association. Since that time a much wider experience has been acquired and sufficient time has elapsed to determine the endurance and physiological reaction after arthroplasty of the hip in an appreciable number of cases. Previous publications have considered in detail the etiology, pathology and physiology of ankylosis in the hip joint and the indications for the operation. Therefore, on this occasion the remarks will be confined chiefly to a presentation of the end results, following arthroplasty in monarticular and bilateral ankylosis.

The operative procedure has also been described previously, but an improvement in technic has been made since the former publication. The U-shaped incision of Kocher has been discarded and the anterior approach as described by Smith-Peterson is employed routinely; the hip joint may be reached by following the fascial planes between the tensor fascia lata and the sartorius, without severance of the muscle fibers. The joint capsule is severed transversely. The osseous ankylosis between the superior wall of the acetabulum and superior surface of the head of the femur is divided first. A large Murphy chisel is used and should

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be driven into the bone at right angle to the pelvis in order to secure a horizontal plane to the roof of the acetabulum; otherwise the socket may slant upward and outward,

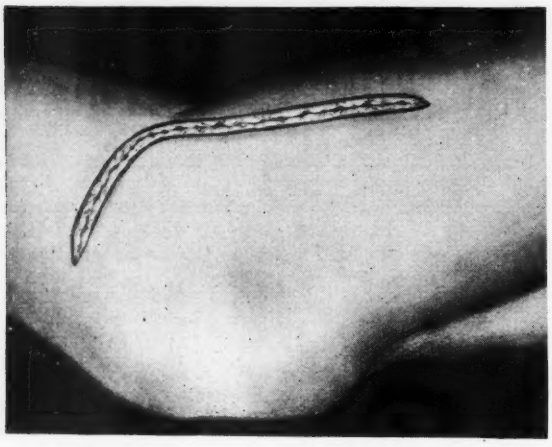

Fig. 1. Skin incision for arthroplasty of hip.

which is obviously conducive to instability or even actual dislocation. To sever the remainder of the osseous between the inner and inferior aspect of the head and the acetabulum it is usually necessary to employ a curved woodcarver's chisel. After severance of the ankylosis the hip is dislocated, care being taken not to strip the soft tissues from the neck and trochanteric region of the femur. Severance of the ankylosis destroys one of the chief sources of blood supply to the head of the bone, and, if there is further interference of circulation by extensive dissection, aseptic necrosis of the head may ensue. The operation for making a new joint is facilitated by wide exposure, but the physiology of the part must be duly regarded if satisfactory restoration of joint contour is to be maintained.

If possible the head of the femur should be made slightly smaller than normal and the acetabulum about the normal size. There should be a space of from one-half to three-fourths of an inch between the head and the acetabulum at all points. If the relation between the head and acetabulum is out of proportion there will be motion but with instability, resulting in a typical listing limp. The exact relation between the head of the femur and the acetabulum after operation depends on the quality of the bone structure and the extent to which the disease process has involved the head, neck and acetabulum. For example, the head of the bone may be atrophic or show numerous small cavities filled with fat, so that more bone than is desired must be removed. In consequence the size of the head and the depth of the acetabulum is not an arbitrary equation but an individual one. In bilateral ankylosis or in those with deformity of such a degree as to prevent weight-bearing, osseous structure is always defective.

A separate incision is made over the lateral aspect of the thigh and a strip of fascia lata, approximately 4×6 inches, is excised and folded longitudinally at about the center. This double layer is then placed over the head with the fold at the junction of the inferior aspect of the head and neck, and anchored with one or two sutures to the soft structures at this point, or to the bone through small drill holes. One flap is drawn over the head and sutured to the remains of the capsule at the junction of the head and neck on the superior aspect, thus investing completely the head. The other free end is grasped at each corner by an assistant with small forceps and with a bone skid introduced between the two layers, the head is carefully reduced into the socket. After reduction, the upper portion of the folded fascia lata approximates the raw surface of the acetabulum, investing same. The free end of this fold is attached to the bone or capsule at the superior margin of the acetabulum by three or more interrupted sutures of No. 1 chromic catgut. Thus is secured a double layer of fascia lata reproducing a facsimile of the primitive embryological joint. The rough outer surface of the fascia lata is applied to the bone of the head and acetabulum, as this surface is composed of loose areolar tissue adaptable to invasion by new blood vessels from the interosseous spaces. The smooth glistening inner surface of the fascia forms the articular surface of the entire joint, thereby facilitating motion. No effort is made to close the capsule or suture the muscles, as they are satisfactorily approximated when the head is replaced into the acetabulum. The deep fascia and muscular attachments to the crest of the ilium are resutured by No. 1 chromic catgut, and the skin closed in routine manner.

When the operation is completed a double spica cast is applied with excessive padding about the extremity and with traction of from ten to twenty pounds weight on the leg. On the fourteenth day the cast is bivalved, and active and passive movements instituted by the patient through the aid of

a system of sling and overhead pulleys. The patient remains in the bivalved cast for a period of four to six weeks, when walking is permitted with the aid of crutches. Great care must be exercised for six months to prevent flexion and adduction contracture, and if there is the slightest tendency to such a deformity the patient is required to hyperextend the hip at intervals during the day by lying prone on a firm surface with sand bags under the lower anterior aspect of the thigh. Also he may be placed in a cast or splint to maintain the proper position at night and at certain periods during the day. Physiotherapy in various forms is of value, but especial attention must be given to cultivation of the hip muscles, particularly the flexor group, otherwise motion will be in excess of function. As previously emphasized, the status of bone structure must be the guide to increased weight-bearing. In those with extensive osteoporosis an abduction brace with a Thomas-ring is employed until the roentgenogram demonstrates that there is a sufficient increase in density.

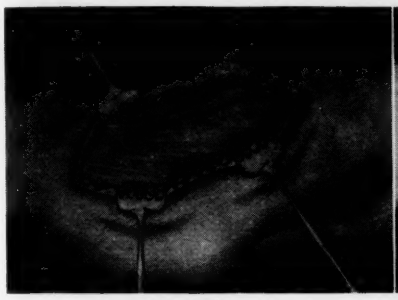

Fig. 2. Exposure of muscles.

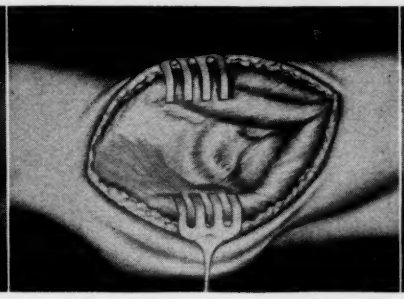

Fig. 3. Complete exposure of ankylosed hip, being careful not to remove any more attachments of the soft tissues about the neck of the femur than is absolutely necessary.

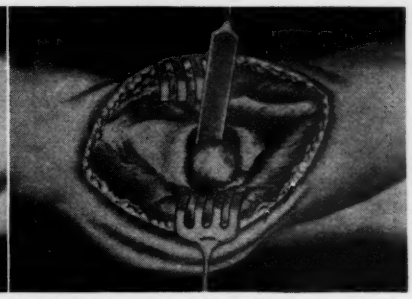

Fig. 4. Excision of ankylosis and dislocation of the head, being careful to alter the contour as little as possible.

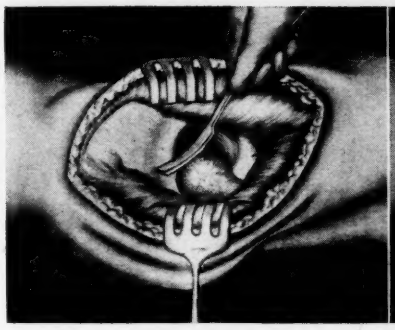

Fig. 5. Smoothing off the head with rasp, leaving the head large and globular.

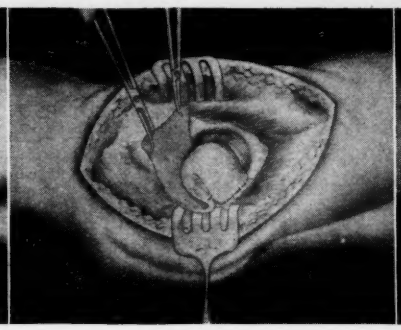

Fig. 6. Interposition of free fascia lata placed to cover the head and acetabulum, making a double layer or practically closed sac when the reduction is made.

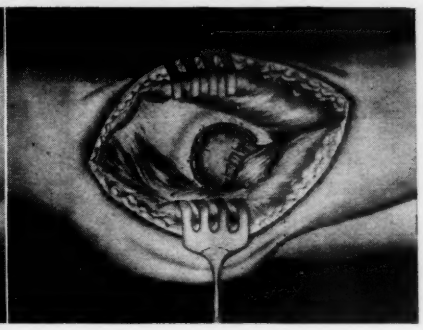

Fig. 7. Complete reduction; new joint completely relined with fascia lata.

Even under the most favorable circumstances one cannot expect to restore a normal anatomical joint, but arthroplasty may induce by surgery nature's method of repair. A joint similar to one formed after arthroplasty is occasionally observed after complete destruction of a joint by a pathological process. This is more often illustrated in the hip than in any other joint, and good function may at times be secured after the articular surfaces of the head of the femur and acetabulum have entirely disappeared. In the Sir Robert Jones lecture entitled "The Physiology of Arthroplasty," the author demonstrated that the types of joints secured after arthroplasty and after a destructive process when ankylosis did not occur, were histologically and mechanically identical. Opportunity has been afforded of exploring joints from one or two years after arthroplasty. At the end of one year there is a joint cavity with synovial fluid, and the structure of the new articular surface is composed from within outward of three strata: fibrous tissue, fibrocartilage and spongy bone, the fibrous tissue of the osseous interspaces being continuous with

the deeper portion of the fibro-cartilage. Even after one year the fibrous layer resembles so closely the original fascia lata that it is strongly suggested that this structure has become revitalized and not substituted. A synovial membrane is reformed which secretes lubricating fluid, with usage the fibrous layer is gradually replaced with cartilage. There may be irregularities in the contour of the joint, which have been shown to be due to aseptic necrosis following operative disturbances in circulation. In many instances such irregularity is consistent with excellent function and endurance. However, this complication can usually be avoided to a large degree by care not to impair the circulation by stripping the soft tissues from the adjacent bone.

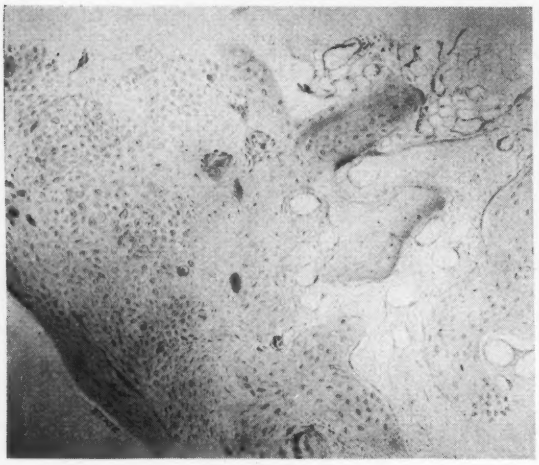

Fig. 8. Photomicrograph of fascia lata. (a) Inner or visceral surface which is smooth and glistening. (b) Outer surface which consists of loose areolar tissue.

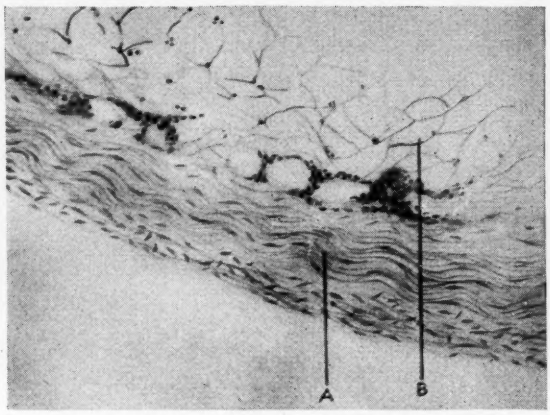

Fig. 9. Photomicrograph of specimen of articular surface removed one year after arthroplasty, showing layer of dense fibrous connective tissue containing few cells closely attached to a cartilaginous layer and underlying cancellous bone.

TABLE I

A—Monarticular	Operations	Cases
1. Acute pyogenic infection	43	43
2. Low grade infections	9	9
3. Traumatic	5	5
	57	57
B—Bilateral		
1. Acute pyogenic	29	15
2. Progressive polyarticular (atrophic rheumatoid)	41	22
	127	94

An analysis of all cases of arthroplasty of the hip cannot be made collectively, as there are many factors which materially influence the end result, namely, etiology, pathology and distribution of ankylosis (single, bilateral or multiple), and duration No method of analysis is absolutely satisfactory, but for the purpose of description it has been found convenient to classify the cases according to (1) distribution (monarticular or polyarticular), (2) etiology or pathology. One hundred twenty-seven arthroplasties form the basis of this discussion, and may be divided as shown in Table I.

Acute pyogenic infection is the most frequent cause of ankylosis. The Neisser diplococci is undoubtedly the most frequent etiological agent in monarticular infections, but an accurate history cannot always be secured. The pathological process induced by each of the pyogenic bacteria is so nearly identical that the differentiation of gonorrheal arthritis, staphylococcic arthritis, etc., as separate clinical entities, is not warranted. At operation, four types are encountered. First, those in which the infectious process has been confined largely to the joint cavity and the adjacent bone is invaded only a short distance beneath the articular surfaces. Since it is possible to reconstruct the new joint in normal osseous tissue, this type will give the most favorable results. Secondly, those in which there has been an extensive osteomyelitis involving the entire upper extremity of the femur and the ilium, terminating in dense eburnated bone which does not form so satisfactory a basis for the natural re-formation of the new articulation as the first type, because the circulation to the joint surfaces is more or less sluggish.

This type of bone is not suitable for arthroplasty when it occurs about the knee joint, but it does not contraindicate arthroplasty in the hip. Thirdly, when there has been extensive loss of continuity of the head of the femur and the acetabulum with more or less upward displacement of the head. Fourthly, cystic areas, usually filled with fatty marrow, may be encountered in the head of the bone, which requires more resection of the head than is desirable. This type is observed more often in those in whom there has been no weight-bearing, and is more frequent in bilateral ankylosis than in unilateral.

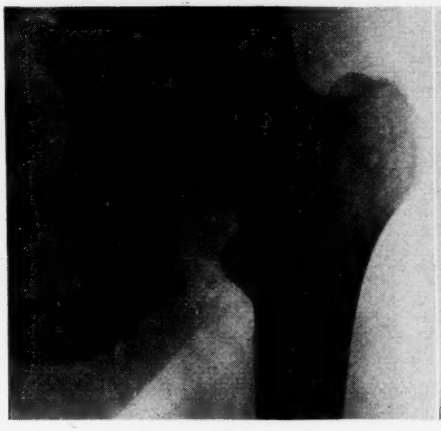

Fig. 10. End result following arthroplasty of the hip. Note width of joint space and regularity of articular surfaces.

Fig. 11. X-ray showing end result following arthroplasty of hip.

After the pathological process has completely subsided the reconstruction of a new joint is feasible, but the nature of the joint secured depends much on the status of the osseous structure and the contour of the parts involved. If there has been extensive destruction of the head of the femur or acetabulum it is obviously not possible to secure the same degree of efficiency as when it is possible to conserve even approximately the normal relations. However, it is often surprising to note the degree of function that may be acquired after arthroplasty in which the contour of the parts is far more normal.

Arthroplasty of the hip is indicated in all low grade monarticular affections after the process has subsided, with the exception of tuberculosis. An afebrile type of infectious arthritis is often the cause of the condition and usually there is fibrous ankylosis, pain on motion, and superficial involvement of the osseous surfaces; otherwise the structural changes are apparently the same as those encountered in acute pyogenic infections confined to the articular surfaces. The so-called "Coxa Malum" may be encountered with massive hypertrophy of the head and neck of the femur, with often a hood of bone extending about the margins of the acetabulum. This condition may be caused by any process that induces gross articular incongruity, as infectious arthritis, coxa plana or epipyseal separation. The structure of the bone is so dense and the head of the femur and acetabulum so large that even after reconstruction the desired proportion cannot always be secured, or, if secured, the circulation to the head may be so defective that satisfactory contour cannot be maintained.

Ankylosis of the hip as the result of trauma is comparatively rare, but as there has usually been no infection, the area involved is most favorable for operative procedures. However, there is often such extensive comminution of the head and the acetabulum that the desired relations cannot be obtained.

The end result after arthroplasty of the hip should not be estimated until the elapse of two years, as it has been found that this period of time is required by nature for complete reconstruction of the new articulation. In some instances there has been an increase in the range of motion after this period and frequently excellent function has been secured earlier, and maintained for many years thereafter, but as definite changes which affect the functional status may become apparent after twelve months,

final conclusions should not be made before the end of the second year.

The end results of arthroplasty in unilateral ankylosis are summarized in Table II.

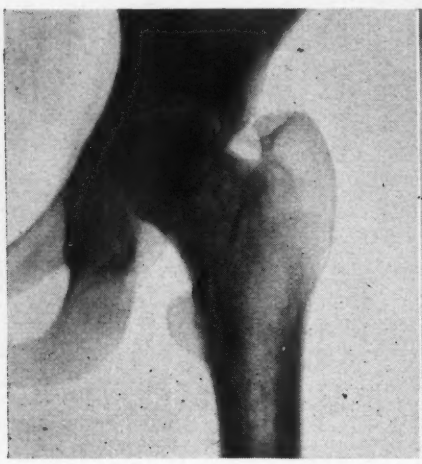

Fig. 12. X-ray one year following arthroplasty of hip. Later there occurred aseptic necrosis and absorption of the head of the femur, due to interference with the blood supply.

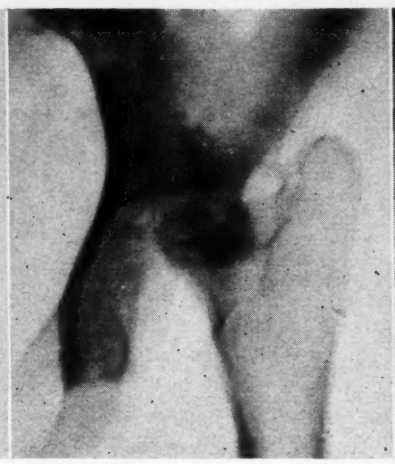

Fig. 13. Same as Figure 12 one year later, showing necrosis of head of femur.

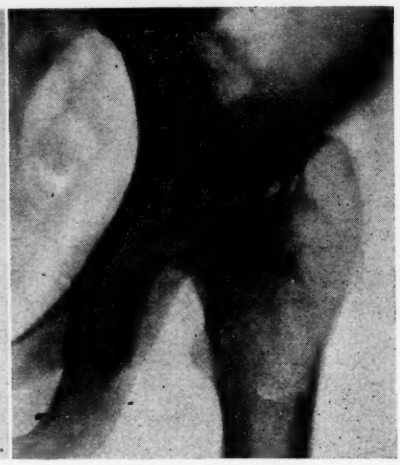

Fig. 14. Same as Figure 12 and Figure 13 two years later, showing complete absorption of head of femur, demonstrating necessity of conservation of circulation.

TABLE II

	Excellent	Good	Failure	Unknown
Acute pyogenic	23	3	6	11
Low Grade	3	3	2	1
Traumatic	1	3	0	1

"Excellent" signifies a joint in which there is satisfactory endurance, practically no limp, or a very slight one, with motion varying from 160° to 90° flexion, and other movements in the same proportion. Muscle power in *nine* cases was not commensurate with the extent of motion, but was sufficient for all practical purposes. For example, a patient may be able to flex the hip only to 110° against gravity, while passively the hip may be flexed to 60°. The Trendelenburg sign in these patients is positive. In *thirteen* cases active motion can be carried out to the limit of the range of motion secured. In these the Trendelenburg sign is usually negative.

"Good" signifies a satisfactory range of motion, but a definite limp and deficient muscle power, which is apparently due to unsatisfactory relations between the head of the femur and the acetabulum; usually the head is too small. Muscle power is sufficient for ordinary walking, but motion against gravity, or when under strain, is often accomplished by fixing the head against the acetabulum, by the contraction of the pelvic and femoral muscles and employing compensatory movements of the spine. Pain after excessive walking is experienced. However, there is a satisfactory degree of endurance, and all patients in the group expressed themselves as well pleased with their condition as compared to their former state in which there was firm ankylosis. The Trendelenburg sign in these is decidedly positive.

In *five* cases failure was due to the recurrence of ankylosis, but normal anatomical position of the hip was restored and better functional use of the extremity as a whole secured. In *two* cases there was extensive absorption of the head and neck of the femur so as to cause a painful and unstable hip, but in no case did actual dislocation occur. In one of these a good result was secured after a second operation to change the angle of the superior wall of the acetabulum from an incline to a horizontal plane. One patient died a year after operation from miliary tuberculosis, after relighting a latent tuberculous infection of the joint. As a definite history was not obtainable and the roentgenogram did not resemble tuberculosis, the operation was undertaken without knowledge of the actual pathology present. Also, at operation, there was no gross evidence of this disease. In one case in which ankylosis surrounded the joint, the sciatic nerve was injured during the operation, resulting in persistent foot drop and loss of sensation to the leg. The

TABLE III

No.	Name	Age Op.	Sex	Year Op.	Walking		Long Dist.	Pain	Stability	Support	Comp. Prev. State	Occupation
					Down stairs	Up stairs						
1	J. W. B.	23	M	1916	Ex	Ex	Ex	None	Ex	None	Ex	Auto slsm.
2	E. B. B.	33	F	1918	Ex	Ex	Ex	None	Ex	None	Ex	?
3	A. B.	26	F	1921	Ex	Ex	Ex	Sl	Ex	None	Ex	H. W.
4	E. P.	18	F	1922	Ex	Ex	Ex	Sl	Ex	None	Ex	None
5	W. C. W.	30	M	1923	Sl	Sl	Sl	Sl	Good	Cane	Good	?
6	G. P.	29	F	1923	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
7	H. R. R.	30	M	1923	Ex	Ex	Ex	None	Ex	None	Ex	Squire
8	G. K.	22	F	1924	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
9	O. D.	19	F	1924	Ex	Ex	Sl	Occ	Good	None	Good	H. W.
10	L. B.	30	F	1926	Ex	Ex	Ex	None	Ex	Cane	Ex	H. W.
11	A. S.	33	M	1926	Sl	Ex	Sl	Occ	Good	Cane	Good	Cook
12	I. W.	19	F	1926	Ex	Ex	Ex	None	Ex	None	Ex	No
13	E. L.	26	F	1926	Ex	Ex	Ex	None	Ex	None	Ex	?
14	B. S.	45	M	1926	Sl	Ex	Ex	None	Good	None	Ex	Supt.
15	E. K.	24	F	1927	Sl	Ex	Ex	None	Ex	None	Ex	Steno.
16	W. W. R.	40	M	1927	Sl	Sl	Sl	Sl	Good	Cane	Good	Brakeman
17	L. S.	35	F	1927	Ex	Ex	Ex	None	Ex	None	Ex	?
18	A. G. H.	44	M	1928	Ex	Ex	Ex	Occ	Ex	None	Ex	Druggist
19	W. V. V.	44	F	1928	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
20	A. L. A.	24	F	1928	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
21	V. C.	26	F	1929	Ex	Ex	Ex	None	Ex	None	Ex	
22	R. W.	18	F	1929	Ex	Sl	Sl	None	Ex	None	Ex	Weaver
23	R. E. L.	38	M	1929	Ex	Ex	Ex	None	Ex	None	Ex	Grocer
24	L. J.	28	F	1929	Ex	Sl	Sl	Occ	Ex	None	Ex	H. W.
25	G. G. A.	32	F	1929	Ex	Ex	Sl	Occ	Ex	None	Ex	H. W.
26	C. H.	29	F	1930	Sl	Ex	Ex	Occ	Lax	Cane	Ex	Steno.
27	H. B. O.	27	F	1930	Ex	Ex	Ex	Sl	Ex	Cane	Ex	H. W.
28	T. R.	20	M	1930	Sl	Sl	Sl	Sl	Good	None	Good	Farmer
29	R. H.	29	F	1930	Ex	Ex	Sl	Occ	None	None	Ex	H. W.
30	E. G. P.	35	F	1931	Sl	Sl	Sl	None	Ex	Cane	Ex	H. W.
31	C. E. J.	46	M	1931	Ex	Ex	Ex	None	Good	Cane	Good	B'smith
32	M. H.	40	F	1931	Ex	Ex	Ex	None	Lax	None	Ex	None
33	J. B. M.	25	F	1931	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
34	F. M. L.	29	F	1931	Ex	Ex	Ex	None	Ex	None	Ex	H. W.
35	R. S. C.	35	M	1931	Ex	Sl	Sl	Sl	Ex	Cane	Good	Machinist
36	J. E. I.	62	F	1932	Sl	Ex	Sl	Occ	Good	None	Good	?

patient had excellent function in the hip, so that this case should not be classed as a failure, but rather as a complication. Reports of these two cases have been published previously.

The problem, as I have repeatedly stated, is not one of securing more motion, but a joint with endurance which will stand without inconvenience the ordinary strain of daily life. In consequence, an analysis of a

number with satisfactory functions ranging from two to seventeen years after operation is most valuable in determining the practical results secured. A similar analysis of arthroplasty of the knee was made in 1925, and the same scheme has been employed in the accompanying tabulation after arthroplasty of the hip.

Of the thirty-six cases tabulated there were six in which ten to seventeen years have elapsed since operation; of these, not one uses any form of support. In eleven cases, five to nine years have elapsed and only one uses a cane. In nine cases, three to four years have elapsed and two use a cane. In five cases, two years have elapsed and two use a cane. Not one uses any form of support except for walking long distances. It is also apparent that the longer the period of time, the stronger the joint and the less the need for using any form of support. From the table it is also apparent that the longer the period after operation, the less the pain and disability.

Of the forty-four cases in which end results can be estimated, there were twenty-seven excellent results, or approximately 60 per cent; nine good, or approximately 22 per cent. Therefore, 82 per cent may be classed as satisfactory. There are eight who pursue rather strenuous occupations which require constant standing or walking, as follows: salesman, superintendent of sawmill, brakeman, druggist, grocer, farmer, blacksmith and machinist. The remainder do not pursue especially strenuous vocations, but are apparently capable and efficient. However, as I have often stated, procedure is not offered in those with laborious occupations unless the individual is capable of rehabilitation, nor with those in whom compensation is pending. There are thirty-six women and twenty-one men, which indicates that a stiff hip is by far more embarrassing to women than to men. The problem of childbirth and sexual relations must also be considered in women.

The roentgenograms made in those with favorable results after the lapse of many years indicate that the process of restoration of permanent articular contour is accomplished within a period of two years, but after this time there may be some increase in condensation of the articular surfaces, but no material change in the contour. In a large percentage there was slight loss of osseous structure in the surface of the head of the femur within the first year, but no change in the acetabulum in any case. In four cases there was a sequestration with gross changes that materially affected the end result. In the thirty-three cases there was no apparent change after the lapse of many years. The problem is purely one of circulation to the head of the femur, which is also apparent after fracture of the neck of the femur and traumatic dislocation of the hip, the main blood supply to the head being from the vessels which enter the head from the pelvic bones after ankylosis or from the ligamentum teres, which obviously must be severed by operation. In recent years, with greater care not to strip the soft parts from the neck, there has been much less change in those in which a new head could be constructed in normal cancellous bone; but in those in which the head of the bone is exceedingly dense, as in "Coxa Malum," the probability of sequestration is possibly greater. The circulation is impaired in this type of bone, not alone in the hip but elsewhere, as often illustrated in decreased resistance in ununited fractures and after autogenous bone transplants into bone of this type.

Bilateral Ankylosis of the Hip.—The problem is quite different when the ankylosis is bilateral or diffuse, involving a majority of the articulations. This condition has recently been considered in detail in an address before the Pan-American Medical Association, which will be published later, therefore only a brief review will be given.

The etiological factors causing bilateral ankylosis of the hip are acute pyogenic infection and low-grade progressive polyarticular arthritis, atrophic or rheumatoid arthritis. There were seventy arthroplasties in thirty-seven cases, in five of which the ankylosis was diffuse involving many joints of both the upper and lower extremities, and usually the spine. In these five cases, all operations upon the hips were failures, and it is questionable whether it is possible to restore a new joint when the weakness of the muscles and ankylosis of other joints renders the individual incapable of carrying out the necessary exercises to secure the natural process of functional adaptation. And also it is difficult and often impossible to keep up the morale of the patient through a long series of operative procedures. Arthroplasties upon the elbows and jaws were

quite successful and gave great comfort to the patient. These five cases are therefore excluded, leaving thirty-two cases in which there were sixty-two arthroplasties. Of the thirty-two cases there were fifteen cases as a result of acute pyogenic infection, and seventeen cases as a result of progressive polyarticular arthritis, the so-called ankylosing type. In ten of these due to acute pyogenic infection the spine was ankylosed, and in all of those due to progressive polyarticular arthritis. This obviously makes it impossible to secure the compensatory movement in the propelling force of the spine, and renders the restoration of normal gait impossible.

In those due to acute pyogenic infection there is no question as to indication if the process has entirely subsided, but there is always a possibility of relighting a latent infection. In those as a result of progressive arthritis, no operations are indicated until the process is sub-acute, dormant or arrested. Surely every method of treatment, as removal of foci of infection, must have failed to completely arrest the disease before surgery should be considered. Also the operations on both hips must be carried out before there has become involvement of practically every joint in the body.

Of the fifteen cases with bilateral ankylosis due to pyogenic infection, both hips were operated upon in six and only one hip in three. Of these in only one case were we able to secure appreciable function in both hips ranging from 30° to 90°. In three cases function was secured in one hip, 30°, 60°, 20° respectively. There were two deaths as a result of an acute streptococcus infection relighted twenty-four hours after the operation. The danger of a recurrence of such an infection after any operation, in those with extensive involvement of bone, is too well known for further comment.

In one case in which both hips were successfully mobilized, aged twenty years, the patient had an ankylosed knee in which arthroplasty was also successful, with a range of about 40° motion. This was the only case in which arthroplasty was successful in three joints of the lower extremity. In one of the hips ankylosis recurred, requiring a second arthroplasty, making a total of four operations on this one individual, but the result warranted the operative risk and prolonged confinement.

Of the seventeen cases with progressive polyarticular arthritis there were seven in which the condition of the patient was materially benefited so as to render walking possible to a practical degree. In five cases only one hip was successfully mobilized with range of motion from 30° to 40°, and in two cases both hips were mobilized with motion from 30° to 40°. Although two to four years have passed since operation, we must remember that this is such an insidious process that there is the possibility of recurrence, and more time must elapse before evaluation of the operation in this type of case can be made. However, it is apparent that the return to active life is one of the most effective measures in arresting any low-grade or chronic progressive process.

There were twenty-nine arthroplasties in fifteen cases resulting from acute pyogenic infection, with five successful and twenty-four failures. This makes only 20 per cent success, but 33 per cent of the patients were materially benefited. In those with progressive polyarticular arthritis there were thirty-three arthroplasties in seventeen cases, with seven successful, twenty-six failures, 27 per cent operative success, but 41 per cent of patients improved. Of the entire group of thirty-two patients there were twelve cases of 37 per cent good results, which materially improved the condition of the patient and permitted a return to more active life. As there have been much better results in recent years it is believed that with improved technique in the complicated after-treatment, a further increase in good results will be secured.

The conditions of unilateral and bilateral ankylosis of the hip joint are entirely different. In bilateral ankylosis of the pyogenic type there has usually been a more intense infection than when only one hip is involved, with more extensive invasion of bone and more fibrosis of the soft parts, and a natural tendency to recurrence by re-formation of scar tissue. In those with progressive polyarticular arthritis the process is usually more or less active, with the possibility of further invasion of the operated area. Also the necessary functional use of the joint is far more difficult to carry out than when there is one normal hip. This is not a very favorable report for the average operative procedure unless one realizes the serious disabilities of the afflicted patients; however, when one considers the

marked improvement in satisfactory results from arthroplasty in monarticular affections, it is possible that with further experience better results may be secured in patients with bilateral ankylosis.

In conclusion I desire to emphasize:

1. The physiology of the upper extremity of the femur must be duly regarded, at the time of operation and thereafter. The circulation to the head of the bone must be considered of prime importance, and the bone structure must be protected from excessive weight-bearing until the internal structure of the bone has been sufficiently restored.

2. Although there have been a small number of successful cases in those with laborious occupations, the procedure should not be advised unless the individual is able to undergo rehabilitation if necessary. Also the procedure has not and should not be advised as long as compensation is pending.

3. There has been marked improvement in the percentage of end results in monarticular ankylosis with increased experience. The problem is no longer one of motion, but one of function, as recurrence of ankylosis has been exceedingly rare in recent years.

4. The end results in bilateral ankylosis are apparently not encouraging, but when the gravity of the condition is considered the procedure is worthy of trial. In the future much consideration should be given to the intricate problem in this class of patients.

5. The new joint restored is not a normal one, but nature's method of repair, which is a question of functional adaptation of the parts that can be accomplished only by active use, which depends entirely on two factors: the mechanical construction of the joint, with due regard to physiology, and the coöperation of the patient in reestablishing actual function and not mere motion.

THYROID SURGERY IN SOUTHERN MICHIGAN AS AFFECTED BY THE GENERALIZED USE OF IODIZED SALT

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DETROIT, MICHIGAN

To the mariner geography means one thing—routes, safe channels, harbors; to the weather forecaster it means areas of high and low barometric pressure; to the pioneer it means mountain ranges, valleys and trails. To the medical scientist the map has been divided into areas of endemic diseases. It is the medical map that has been most subject to change in this last generation, a change made possible by the increasing knowledge of the fundamentals of the causes of endemic diseases or the manner in which they are spread, and this knowledge has led to ways of prevention.

The medical geographer has been busy changing his colors where yellow fever, malaria and typhoid fever prevailed. On the medical map our textbooks charted the Great Lakes area as an endemic goiter region, not the only such region but the one that interests us the most today. It would appear that this map is due for another change. Baumann thirty-seven years ago discovered the constant presence of iodine in the normal thyroid gland. Later workers noticed that in areas of endemic goiter there was a deficiency in the iodine content of the food of that area. By making up this deficiency in the diet endemic goiter is on the way to oblivion and there is a question now as to whether the surgical forms —adenoma and perhaps hyperplasia of the thyroid—are not far less apt to occur when simple goiter is not first present. So again the altruistic M.D. cuts off some more of his nose and makes his own existence more precarious and difficult.

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A trained observer from Dr. William S. Halsted's clinic at Johns Hopkins, where there was always a large number of goiter patients, was impressed on coming to Detroit in the winter of 1915-16 by the number of goiters seen on the streets. Almost every other woman on the street cars seemed to have some enlargement of the neck. Today the picture is very different even to the casual observer.

Seaweed and the ash of sea sponge had been used by the ancient Chinese, the Greeks and the South American Indians in the treatment of goiter. Courtois of France in 1812 first discovered the element iodine. It soon followed that the iodine of the seaweed and sponge was the active principle in them effective in the treatment of goiter. About 1840 iodized salt was used as a prophylactic measure against goiter in Switzerland. Breuer in Nothnagel's clinic in 1900 first described iodine hyperthyroidism (Jod-Basedow). He advised against the use of iodine in the treatment of goiter. Dr. Theodore Kocher in Berne in papers published in 1904, 1910 and 1911 concluded that iodine was distinctly very harmful in adenomatous and hyperplastic goiters. Kocher was the leading goiter student of his day and his opinion had great weight and his influence extended to this country through his American students—especially through Halsted, who spent much time with him and shared his views. So strong was this feeling that I feel reasonably sure that if I, as his resident surgeon, had used iodine in the preparation of one of his patients for operation I would have been in imminent danger of dismissal. However, Halsted was greatly interested in the work of Marine, a former student of his, when he began the study of goiter and its relation to iodine.

It was this work of Marine and his associates, begun in 1907, which marked the newer and more practical knowledge of the role of iodine in thyroid metabolism. They again turned the spotlight of professional interest on the use of iodine as a prophylactic measure against endemic goiter.

Plummer deserves the credit for turning our attention to the use of iodine in the preparation of sick goiter patients for operation. He had fortunately a new measuring rod (the basal metabolic rate) which helped tremendously in gaging the activity of the thyroid. It aided in showing the rate of improvement in the sick hyperthyroid patient on the administration of iodine and also it showed when that improvement became stationary. This is the time that the patient is in the optimum condition for operation. Had Breuer, Nothnagel, Kocher, Halsted had this indicator it is possible their attitude toward iodine would have been different.

MICHIGAN EXPERIENCE

Surveys of the school children in different countries have shown the goiter incidence as high as fifty per cent. Fifty per cent of the high school students in Grand Rapids had thyroid enlargement in 1923 as shown by the survey directed by Dr. C. C. Slemons. This was probably the approximately correct percentage for the state.

In 1924 iodized salt was introduced to the population of Michigan through the fine efforts of the Pediatric section of the Michigan State Medical Society (with Dr. D. M. Cowie as Chairman of the Committee), Dr. C. C. Slemons and the State Board of Health. The committee had the approval of the State Medical Society and were aided by Dr. O. P. Kimball, a former associate of Marine. The work of this committee was accomplished through meetings with the salt manufacturers, who coöperated splendidly in placing iodized salt on sale in the grocery stores throughout the state. Wide publicity was obtained for the new salt through letters from the State Board of Health to school children, parents and organizations.

In the clinic of the Henry Ford Hospital for a good number of years prior to this we had been treating non-toxic diffuse goiter* (simple colloid) in children with sodium iodide with such good results that we were easily sold on the probable efficacy of iodized salt distributed through the grocery stores.

Iodized salt in Michigan contains .01 per cent of sodium iodide. The Committee recommended that the use of this salt should preclude the use of any other form of iodine by the population and to be effective must be used for cooking as well as table use. The salt producers estimated that each person in Michigan consumed about five or six

*The American Association for the Study of Goiter recommends the following new goiter nomenclature:

Type 1—Non-toxic Diffuse Goiter
Type 2—Toxic Diffuse Goiter
Type 3—Non-toxic Nodular Goiter
Type 4—Toxic Nodular Goiter

pounds of salt per year, whereas other estimates placed it up as high as eight pounds per year. The Committee took the eight pounds per year as the safe average. With

Fig. 1. Courtesy Detroit Board of Health.

the above average of sodium iodide, *i.e.*, .01 per cent, this would give the average consumer about one milligram per day.

The most recent figures[3] show the iodine content of the human thyroid ranging from 2.4 to 23.7 mg. with an average of 8 mg.

The diseased glands are much poorer in iodine content, or should it be said that when the iodine content is very low the gland is diseased?

As two or three milligrams of sodium iodide per week will prevent goiter and ten milligrams has been proved to do no harm it is seen that the average percentage in Michigan salt is well within safe limits.†

In a paper in 1927[2] we told of our experience which seemed to suggest that the iodized salt might be responsible for the increase in the number of nodular (adenomatous) goiters coming to operation. Our curve seemed to suggest that. The death rate from goiter in Detroit (Fig. 1) seemed also to bear this out. At that time then we had some misgivings as to the possible dire results from the generalized use of iodized salt, in view of these two curves and the previous reports of such fine men as Breuer, Nothnagel, Kocher and Halsted, several decades previous to our experience.

Hartsock, Plummer, Goetsch, Jackson and many others, I believe, were all somewhat skeptical of the use of iodine as an article of diet in the manner under discussion.

Hartsock in May, 1926,[1] from the Crile Clinic reported 16 cases of iodine hyperthyroidism which they felt were due to the use of iodine salt though this salt was sold in such minimal quantities in Ohio due to the opposition of the medical profession.

In a letter to me of August 28, 1932, Dr. Hartsock states, "No one at the present time sees cases which are very suspicious of this condition (iodine hyperthyroidism). The explanation I do not know, and I am very much confused in my own mind about the whole thing." In a second letter, dated August 31, 1933, he writes, "At the present time we doubt very much if we see any cases that are of this nature, *i.e.*, iodine hyperthyroidism."

Cowie of Ann Arbor reports to me in a letter the investigation of several cases of hyperthyroidism supposed to have been induced by the use of iodized salt, "We have run down several reports of ill effects from the use of iodized salt, but in each instance we have found that the reports were fallacious."

Our old ingrained prejudice against iodine was too apt to lead us to conclude that any one taking iodine and developing signs of hyperthyroidism did so because of the iodine. This may not be true. It is a fact that in the Johns Hopkins Luetic Clinic in a series of 6,000 patients (some taking as high as 120 grains of iodides daily for twelve months) not a single case developed hyperthyroidism. In the Henry Ford Hospital with over 3,000 luetic cases under treatment with iodides Dr. Frank Menagh tells me that only one or perhaps two cases have come under suspicion of developing hyperthyroidism with even larger doses of iodides.

This lack of hyperthyroidism development in luetic clinics after huge doses of iodides outside of and in goiter areas raises in my mind considerable doubt as to the existence of iodine hyperthyroidism (Jod-Basedow of Breuer). Certainly no iodine hyperthyroidism should be feared judging from the report of the work of Dr. C. C. Slemons and the Michigan State Board of Health. "We have known for many years

†The latest work by Orr and Leitch states the minimum iodine requirement per day to be about 45 gammas for an adult and 150 gammas for a child. A gamma is 0.000001 gm. A grain is 0.064 gm. or 64,000 gammas. See Editorial J. A. M. A., 101:606, Aug. 19, 1933.

that large, long standing, tumorous goiters in adults occasionally become toxic, and we have been trying to establish the point whether or not some of these cases will become toxic by the use of iodine salt. Of the seven hundred cases we have studied in Western Michigan approximately three-fourths of the cases have used iodine salt continuously since the summer of 1924. Among these we do find an occasional toxic goiter and to be accurate three per cent have developed toxic goiters since they started to use iodine salt. Among those who have not used iodine salt or any other form of iodine 45 per cent have become toxic within the past three years. So summing it all up, we find just fifteen times as many toxic goiters among those not using any form of iodine as we do among those who are using iodine salt."

EXTENT OF USE OF IODIZED SALT IN MICHIGAN

A letter from the largest salt distributor in Michigan (September 1, 1931) states that "in 1924 we shipped 45,079 cases of plain table salt to the State of Michigan. In 1930 58,643 cases of iodized salt and 7,057 cases of plain table salt." Letters from the other large distributing salt companies showed the same ratio of about 8 of iodized to 1 of plain salt.

A letter just received from a large salt company shows the following figures for the last three years of their sales in Michigan.

	Iodized	Plain Free Running
1930	84.8%	15.2%
1931	87.4%	12.6%
1932	94.8%	5.2%

For a few years after the publicity in this matter our patients knew if they were using or were not using iodized salt. Today without the publicity the patient does not know, as a rule, whether he is or is not using iodized salt.

Perhaps the lack of publicity too will result in a decreasing use of this salt. Last week a large chain store reported that they are selling only five iodized salt to one plain.

RESULTS OF THE USE OF IODIZED SALT

The tremendous reduction in the occurrence of enlarged thyroids (non-toxic diffuse goiter) in the school children of Michigan since 1925 is now well known. In Detroit the rate has dropped from over 35 per cent to 1.4 per cent (Fig. 3).

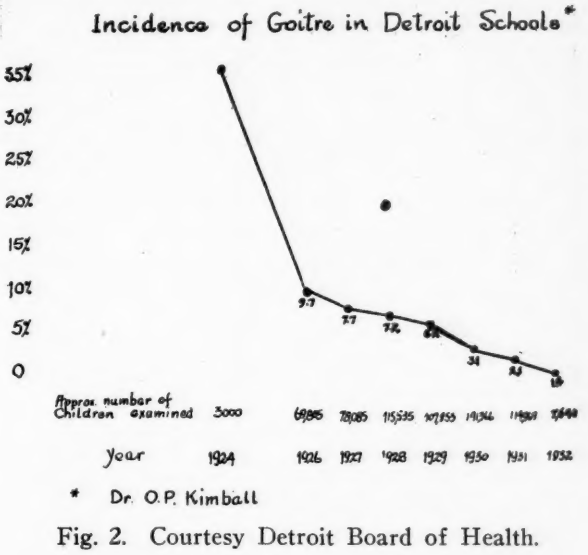

Fig. 2. Courtesy Detroit Board of Health.

All other surveys now show the same decrease approximately. Since in Detroit there is still 1.4 per cent occurrence there are four factors to be considered in trying to arrive at the reason for this. (1) The individual may not be using iodized salt, *i.e.*, he is still having an abnormally low intake of iodine. (2) There may be some physiologic interference with the absorption or the utilization even if the amount of iodine taken is adequate. (3) The individual may use up more iodine than the average so would require more. (4) May non-toxic diffuse goiter be caused by other factors than the lack of iodine? Chesney and now Marine have produced goiter in animals with a diet of cabbage but can prevent the development of the goiter on the same diet with the prophylactic use of iodine.

Today the question has been asked as to whether hypothyroidism has increased in Michigan since the use of iodized salt. We have no evidence in one way or the other with which to answer this question but I should be inclined to answer it in the negative.

TOXIC DIFFUSE AND NODULAR GOITER

In 1927, two years after the salt was in wide use, the numbers of patients with toxic diffuse and nodular goiter began to decline

steadily after an initial rise. Our chart shows this most decidedly.

Previous to 1925 our curve of total operations and thyroid operations was

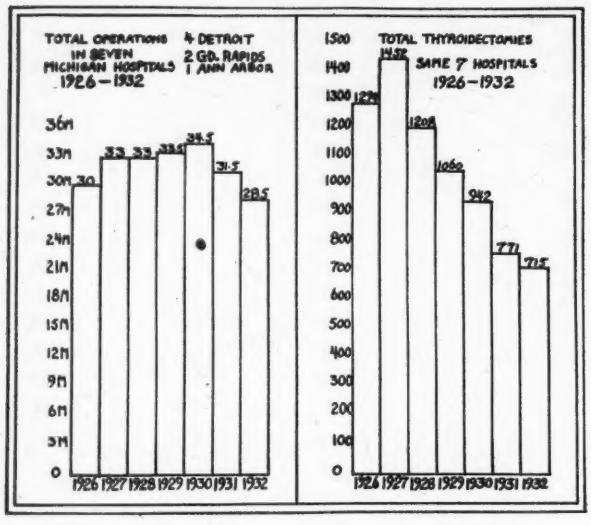

Fig. 3. Compilation from seven hospitals.

(Harper, Grace, Henry Ford and Receiving Hospitals, Detroit; Blodgett Memorial and Butterworth Hospital, Grand Rapids; University Hospital, Ann Arbor.

rapidly rising. This was accounted for by the increased number of beds for patients available after the War and the rapid increase in the population in Detroit.

Through the courtesy of the surgeons of the large hospitals in Southern Michigan we have the curves charted for seven of the largest hospitals in Detroit, Ann Arbor and Grand Rapids. This shows the same marked decrease in the number of thyroid operations following the introduction of iodized salt. Since the Fall of 1929 there has been a great drop in the total number of all operations in the private and and semi-private patient hospitals.

This is partially compensated for by this composite chart showing the total numbers of operations in the seven hospitals compared to the total number of thyroid operations. While the total number of operations during the period of tremendous economic depression has dropped approximately 10 per cent the number of thyroid operations has dropped 50 per cent.

These striking figures over so large an area showing the marked decrease in nodular and toxic diffuse and toxic nodular goiter justify the theory at least that a population freed from the endemic type (non-toxic diffuse goiter) is much less subject to nodular, toxic nodular and toxic diffuse goiter.

CONCLUSIONS

1. The general use of iodized salt has practically stopped endemic goiter in Southern Michigan.

2. Without the presence of endemic goiter nodular and toxic nodular and toxic diffuse goiter operations have been reduced 50 per cent.

(Figures from the large charity hospitals counteract the argument that these patients may not be coming on account of the present great financial depression.)

3. Not a single case has been found pointing to any injurious effect from the iodized salt. (It is an academic question as to whether an existing nodular goiter may be made toxic by the use of iodine.)

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TRANSMISSION OF COMMON COLDS BY FOOD

The possibility that common colds may be spread by fomites has been suggested by epidemiologists, but convincing experimental proof has not been available. The recent demonstration by Bliss and Long of Johns Hopkins University that contaminated food may transmit this disease to chimpanzees, therefore, is significant. Fifteen apes were kept for three months under scrupulous quarantine conditions. All attendants were examined daily for infections of the upper respiratory tract and remained healthy throughout the experiments. The attendants wore masks and gowns and took full aseptic precautions in preparing food and taking care of the animals. During this preliminary period the fifteen apes remained free from infections of the upper respiratory tract. At the end of the period a person suffering from a common cold was allowed to prepare food for the animals. After the food was placed in aseptic containers by this person, he left the kitchen. The attendant then entered, carried the containers to the quarantine rooms, and placed them in the individual chimpanzee cages. Within forty-eight hours after the first meal, five of the apes developed typical symptoms of infection, such as nasal discharge, nasal obstruction, mouth breathing, slight fever and leukocytosis. Two developed a moderately severe cough.—*Journal A. M. A.*

SURGERY IN THE DIABETIC PATIENT*

C. FREMONT VALE, M.D.†
DETROIT, MICHIGAN

Surgical interference in the diabetic patient naturally falls into two distinct groups:

A. Essential, in most clinics by far the larger group, including cases in which surgical complications arise demanding treatment usually as a life-saving measure. Gangrene is, of course, the outstanding example.

B. Elective, including conditions which only surgery can correct, but which have little or no bearing on the progress of the diabetes. Hernia or uncomplicated fibroid of the uterus are examples. We are not now particularly concerned with this group, except to note in passing that its scope has been tremendously broadened by the increased metabolic control made possible by insulin, so that the average case of diabetes need not now be denied such corrective or curative operation because of his basic condition.

The essential group has also greatly increased due to insulin, first, because diabetic persons may now in larger percentage live on to get surgical complications, and, second, because the field is greatly widened in which relatively safe operation may be undertaken in these unfortunate people.

McKittrick and Root[2] give the increase to over 30 per cent and suggest that it may later reach 50 per cent. Our own figures for 1932 were ninety-two out of 310 admitted, or 29.7 per cent, and for five months this year forty-one out of 143 admitted, or 28.6 per cent.

Because the diabetic patient has a fundamentally altered metabolism his reaction is different from the non-diabetic patient as to infection, circulation, diet, anesthesia, shock measures, etc. For these reasons it has become necessary for the surgeon who takes care of surgical complications in diabetic patients to have a more intimate knowledge of this disease and the unusual conditions governing their proper care. And in no other condition is it so necessary to have such close coöperation between internist and surgeon.

It is not my intention to go into detail concerning the medical aspect of diabetes, but as a basis for the intelligent approach to surgical treatment of these cases it is necessary to know certain things.

The most widely accepted but yet unproven theory is that in diabetes there is an insufficiency of insulin supplied by the islands of Langerhans in the pancreas, with the result that not enough glucose is burned.

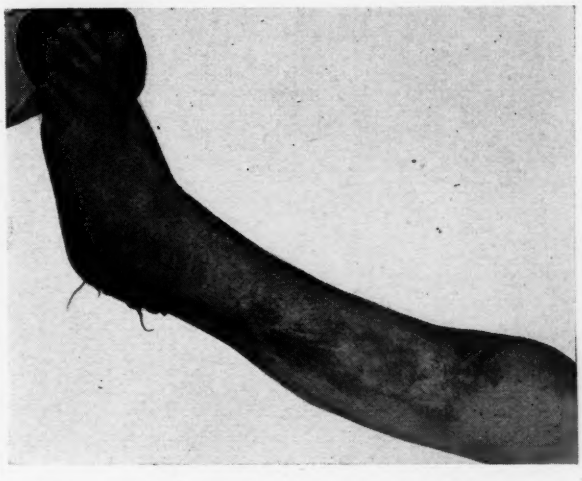

Fig. 1. Moist infective gangrene evidently started by pressure on heel. (See chart, Fig. 2.)

It collects in excessive amount in the blood and tissues, producing a high blood sugar, and variable amounts of glucose spill over in the urine. The storage depots of glycogen, notably the liver and muscles, are depleted of their supply. When not enough sugar is burned in proportion to fat and protein, ketone bodies (B-oxy butyric acid, diacetic acid and acetone) appear in the urine, the CO_2 combining power of the blood falls, and we have acidosis. If this is unchecked coma ordinarily follows. To control such a patient the diet is regulated and insulin given to the end that carbohydrate, fat and protein shall be burned in proper ratio, the strength maintained and glycogen storehouses refilled. When this is done the blood sugar drops, sugar and ketone bodies disappear from the urine, and the patient is said to be controlled.

*Read before the surgical section of Michigan State Medical Society, Grand Rapids, September 14, 1933.

†Doctor Vale is a graduate of the University of Pennsylvania, 1916, A.B. 1909. He served as interne at Lankenau Hospital, Philadelphia, 1916-18. He is Assistant Professor of Surgery, Detroit College of Medicine and Surgery, and Attending Surgeon at Receiving Hospital and Visiting Surgeon at Harper Hospital.

This much at least the mere surgeon must know because his patient must be under the best possible control at the time of operation if the rule of safety is to be followed.

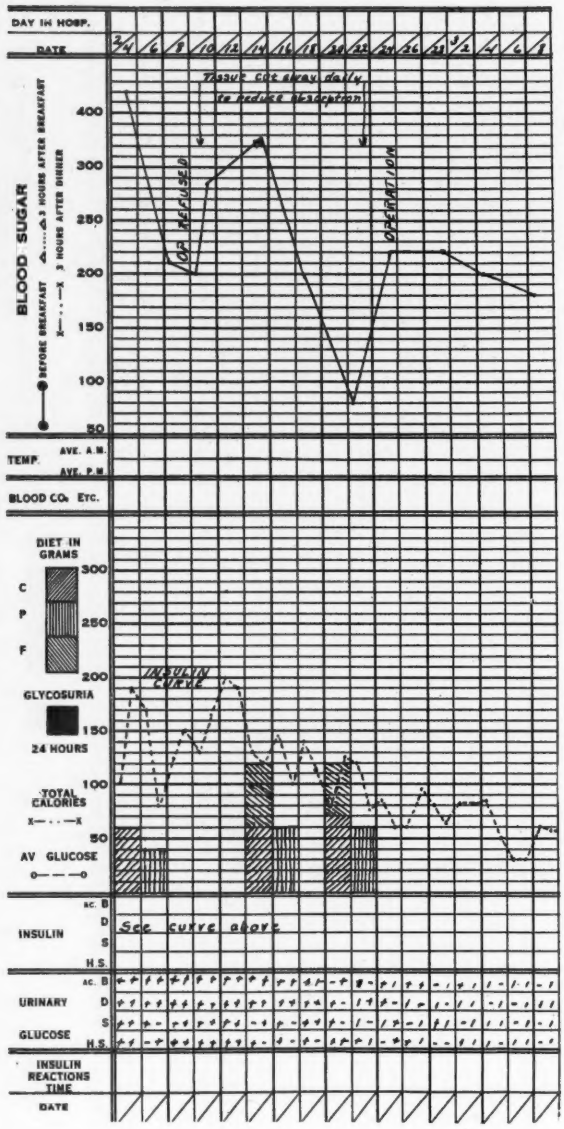

Fig. 2. Composite chart of patient whose leg is shown in Figure 1. Note difficulty in obtaining and maintaining control. Insulin up to 200 units per day.

Most of these cases are only fair risks at best. To operate on a diabetic without intelligent effort to control his metabolism first is with rare exception a questionable procedure.

It follows that any condition which regularly disturbs metabolism will be of definitely greater importance in the diabetic, *e.g.*, fever, infection, toxemia, hyperthyroidism, etc. Any of these may make satisfactory control difficult or impossible to obtain or maintain (Fig. 2).

In January of 1929 through the interest of Dr. Richard McKean a department was set up in Receiving Hospital in Detroit for the careful study and treatment of diabetic cases. I think it is only proper to say that through his efforts a new day has dawned for these unfortunate patients. It has been my privilege to attend the surgical cases since that time. There have been approximately 800 cases admitted, about 200, or 25 per cent, of which have required surgery. For economic reasons very few elective operations have been done.

Both medical and surgical cases are admitted to the diabetic section and remain there throughout their hospital treatment. They are always primarily medical cases. Any surgery necessary is looked upon as a more or less important incident in the whole course of treatment needed. Operative interference is undertaken only after careful consultation and definite agreement between internist and surgeon upon the severity of the diabetic condition, the effect the surgical complication is having upon the patient, the nature and extent of operation proposed, the kind of anesthetic to be used, and finally, and of great importance, the exact time it is to be done.

Preoperative Treatment.—Let us take a case for example. A woman enters the hospital with a gangrenous infected foot (Fig. 1), running a low fever, 4 plus sugar in the urine, and having a blood sugar of 420 mg. per 100 c.c. with a CO_2 combining power of 35. It is obvious she cannot recover without the removal of the leg. However, to proceed in the face of such a turmoil in her metabolism would be fatal. She is put on a low calory diet, 400 to 600, relatively high carbohydrate, usually 60 grams, low protein, about 40, and no fat. This diet is divided into five equal feedings three hours apart. Fifty units or more of insulin are given at once and the following orders written:

Test urine with Benedict's Solution every three hours: Give insulin as follows—

If orange.....20 units
If red.....15 units
If yellow.....10 units
If green..... 5 units
If blue.....none

Twenty-four hours will almost certainly see the patient greatly improved, when, if there is no appreciable change in the con-

dition of the foot, operation will be delayed another day or two. This time is used to build up glycogen stores and determine the insulin requirements more accurately. Her

Fig. 3. Dry arteriosclerotic type of gangrene in a mild diabetic condition. The fourth toe has amputated itself.

blood sugar should by this time be well under 250, the upper limit of relative safety. A blood culture is taken even though there is no clinical evidence of blood stream infection, because the diabetic is particularly prone to develop septicemia. This is often apparent only after amputation, and it is at least comforting to know if the culture was positive before, which it often is.

The day and hour of amputation is then agreed upon. Here the internist has the greater responsibility. He is best able to judge the degree of control, and for how long we may safely expect it to be maintained. It may be very transient (Fig. 2). The operation is done on schedule unless the blood sugar that morning is above 250. Here 9 A. M. means 9 A. M. The patient is prepared for that hour and not two or three hours later. There is no preoperative fasting except where absolutely necessary. Fluids are kept up. Three hours before going to the operating room 150 c.c. of

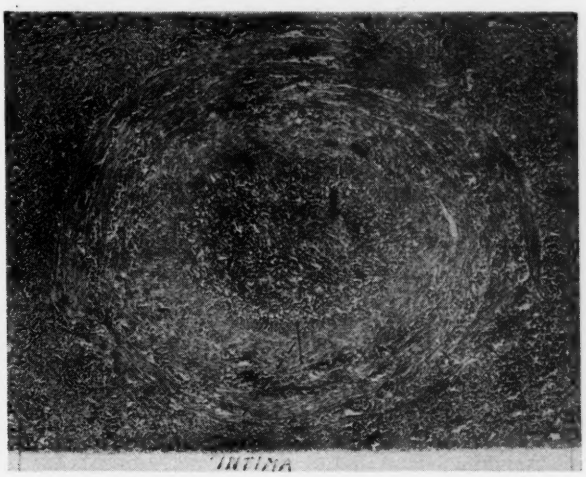

Fig. 4. Section of posterior tibial artery in diabetic gangrene. The lumen is filled with thrombus, but the marked intimal thickening is well shown.

orange juice partially covered with insulin are given. Morphine is not given as a rule. It to some extent inhibits the effect of insulin, but more important is the nausea and vomiting produced in some patients, with its tendency to acidosis. Then, too, most of these cases are not fearful or nervous and need little sedation. The prophylactic barbital preparation for spinal is quite sufficient.

Anesthetics.—The type of anesthesia to be used must be intelligently chosen for each case individually. While a local anesthetic may be wisely selected for many conditions, I believe it is absolutely contra-indicated where the surgical lesion is based on circulatory impairment, as in gangrene of a toe. Failure of healing with extension of infection or gangrene is much more apt to occur because of reduction of tissue resistance and circulation by the injected solution. One is often tempted to use it because of the complete absence of systemic effect.

Nitrous oxide is satisfactory only for very short anesthesias. When prolonged the CO_2 combining power of the blood begins to fall. Ethylene is much preferable where available.

Ether, of course, produces an acidosis even in the nondiabetic. The diabetic operated upon under this anesthetic will develop acidosis, the degree of which will depend upon the severity of his diabetes and

the amount of ether administered. The frequent post-ether nausea and vomiting further upsets the attempt to maintain diabetic control. Its use is justified only in rare cases.

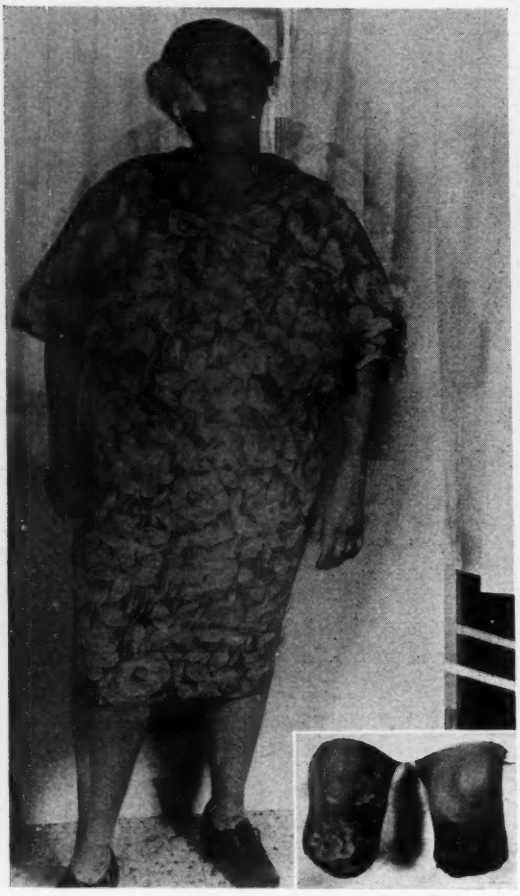

Fig. 5. Youngest patient in series of cases. At age twenty-nine, amputation left leg; at age thirty, amputation right leg, both typical diabetic gangrene. Insert shows stumps three years later on which the patient walks well with artificial limbs.

The duration of any inhalation anesthetic should be reduced to a minimum.

We use novocain subdural block, or spinal anesthesia, in the vast majority of cases; 50 to 75 mg. is usually sufficient for even a mid-thigh amputation. With this amount the blood pressure does not drop much. This is particularly important as most elderly diabetic patients do not have much cardiac reserve. There is little effect on the metabolism, it almost completely eliminates shock, and it has the added advantage of allowing free administration of fluid by mouth.

Postoperative Treatment in General.—The diabetic patient should have food, especially carbohydrate, as soon as he can possibly take it after returning from the operating room, certainly within three hours. Orange juice usually supplies this need satisfactorily. If no food can be taken by mouth, glucose intravenously and saline by hypodermoclysis should be given. The absorption of glucose by the rectum is still a moot question. Certainly it cannot be depended upon to furnish any definite amount in a given time and we never use it. Many cases are able to continue their regular preoperative diet within a few hours, and of course this is highly desirable.

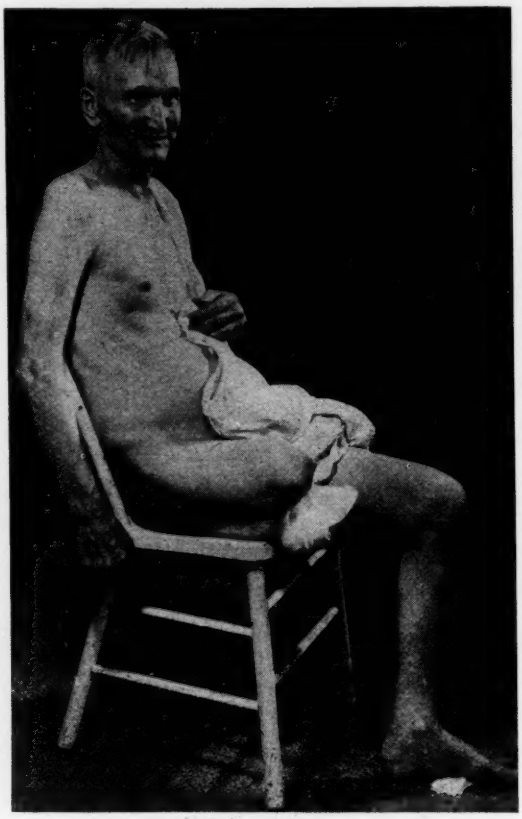

Fig. 6. Result of mid-thigh amputation fifteen days after operation. Note scar beginning to draw posteriorly.

Insulin orders are written as previously described. Wide variations in insulin needs are to be expected. Removal of a source of infection will reduce it rapidly. The most common as well as the most serious complication in this connection is insulin shock or hypoglycemia. Thin or emaciated patients are the more susceptible. A restless person may use his muscles a great deal in the course of a few hours and rapidly deplete them of glycogen. He is then ready to have his blood sugar drop below normal on his regular insulin ration. This is of especial

importance in aged individuals because to them insulin shock, so called, is a real shock, from the effects of which they sometimes do not completely recover even though they are brought out of it temporarily. The treatment of this is the internist's problem, but the surgeon must not be a stranger to it. Glucose intravenously must be given at once. The presence of sugar in the urine cannot be taken as an infallible guide when the patient is taking large amounts of insulin. Urine coming from the kidney may be sugar-free at the time of passing or withdrawal by catheter, but, mixed with sugar-containing urine in the bladder, give a positive test. In severe cases it may be wise to order a small amount of orange juice upon obtaining a completely sugar-free specimen, and also to take the blood sugar twice a day so long as there is uncertainty. We feel that most of these elderly diabetics do better with a blood sugar somewhat above normal.

TABLE I. CLASSIFICATION

Gangrene	No.	Per cent
Abscesses	55	29.7
Carbuncles	20	10.8
Osteomyelitis	16	8.7
Infections	16	8.7
Ulcer—foot	12	6.4
Mastoid—acute	8	4.4
Pelvic	8	4.4
Goiter—toxic	7	3.8
Gall bladder	3	1.6
Hernia, strang. or incarc.	3	1.6
	3	1.6
Miscellaneous	34	18.3
	185	100.00
Died	43	23.2

Table I gives a general idea of the relative frequency with which several surgical conditions are met. It will be noted that the great majority, after gangrene, is made up of some type of infection and therefore that nearly 70 per cent belong in the class of complications typically found in diabetics. Time will not permit the discussion of all of these. Most of them do not need special mention. Two, however, are of such vital importance that they demand attention.

First Carbuncle.—This is very common, ranking second only to gangrene in our experience, somewhat more frequent than others report. There were sixteen cases in a series of 185 surgical patients. It constitutes a very grave complication and for the patient its care is a major procedure. Most of these are extensive (Fig. 7) and the patients severely toxic. Metabolic control is of prime importance.

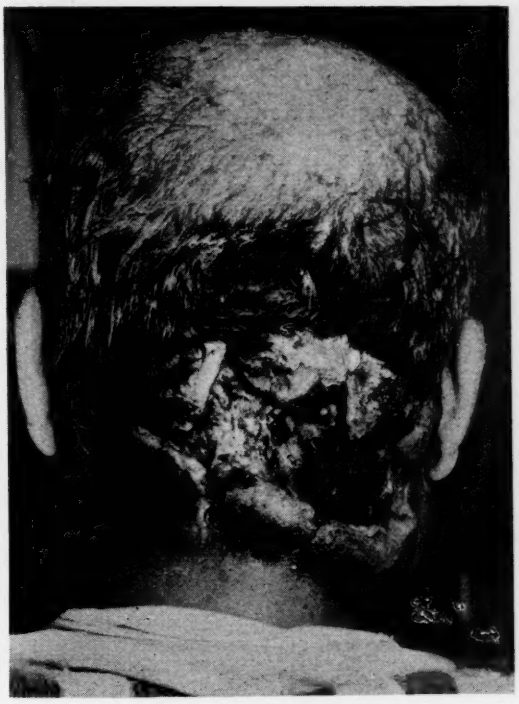

Fig. 7. Carbuncle. Outlines of one transverse and three vertical incisions are seen.

The rule should be to do the most minor operation which will reduce absorption to the minimum. Excision is to be absolutely condemned. Our practice is to make one incision through the longest diameter from healthy tissue to healthy tissue, and one or more incisions, depending on the size of the lesion, at right angles, and then rapidly to trim out the worst of the base under the flaps thus made. If the margin of the infected area underneath the skin is removed, extension need not be feared. The resulting cavity is packed with gauze and the remaining infected slough picked out at subsequent dressings.

Gangrene.—There were fifty-five cases of gangrene in 185 surgical diabetics. The prevalence of this complication is due to the tendency of diabetic arteries to develop an intimal sclerosis (Fig. 4), thus reducing the lumen of the larger vessels.

TABLE II. PERCENTAGE OF ADMISSIONS HAVING GANGRENE

Year	Admissions	Gangrene	Per cent
1929	92	6	6.5
1930	103	5	4.8
1931	143	11	7.7
1932	310	25	8.0
1933	143	8	5.6
Total	791	55	6.9

Shields Warren[2] says: "Arterial occlusion in typical diabetic gangrene is a gradual process, at least at first—a progressive encroachment on the lumen of the artery by intimal thickening, not infrequently showing heavy deposits of lipoid. Hence there is time for collateral circulation to develop. While there may have been pain and disability during the process of readjustment, eventually a delicate point of equilibrium is reached where the combined blood supply from both main vessels and collaterals is just sufficient for the ordinary needs of the limb. Any unusual stress will tip the balance. There will be insufficient blood supply to maintain life of the tissues under abnormal condition, too much to permit mummification. Moist gangrene results, and all too often leads to generalized sepsis.

"On this basis we may say that the typical diabetic gangrene is preventable. Injury and particularly infection can be prevented. Dirt, ill-fitting shoes, carelessness, all simple, all inexcusable in properly taught patients."

We find trimming corns and ingrown toe nails the most common immediate cause of gangrene.

It is to be noted, however, that there are all gradations between the typical dry arteriosclerotic (Fig. 3) and moist diabetic (Fig. 1) gangrenes.

The one great surgical question here is, "Where to amputate." Time will not permit the discussion of tests such as the histamin flare, intradermal saline, the oscillometer, etc., to determine the point of competent circulation. None of these is infallible. In the final analysis clinical judgment based on experience will probably give the best results. Absence of pulsation in the dorsalis pedis or posterior tibial does not always preclude successful amputation of a toe since collateral circulation may have developed sufficiently to permit healing. This is not common. In the same way, absence of popliteal pulsation does not always mean amputation above the knee, but it usually does.

TABLE III. AGE INCIDENCE OF GANGRENE

	Cases	Years	Age*
(Joslin	50	1923	61.0
(Eliason & Wright		1926	59.2
(McKittrick & Root		1928	64.9
(Eliason & Wright	103	1931	69.9
(Eliason[1]	67	1932	61.6
Our series	55	1933	59.5

*Youngest, 29 years; oldest, 80 years.

Let us say just a few words as to the actual operation. Remembering the lowered vitality of the tissues and their susceptibility to infection and recurring gangrene, technic should be followed which will best guard against their occurrence. Meticulous care in detail will often mean the difference between failure and success. The leg should be prepared the night before and a sterile dressing put on to be removed in the operating room when preparation is repeated. A tourniquet is never used. Short equal length anterior and posterior flaps are used. No clamps are placed on the skin as retractors. I have seen areas of gangrene occur at these points of pressure. No instruments touching the skin are used in the deeper parts. Bleeding points or vessels and not masses of muscle are clamped and ligated. A Gigli saw is better to sever the bone. It means less retraction and damage to muscle tissue. Flaps are closed without tension but snug enough to prevent loose space for collection of blood and serum. A soft rubber drain not touching the bone is removed in forty-eight hours. We do not feel that rapidity of operation is the first consideration. Careful, gentle, accurate work should not be sacrificed for time. Postoperative dressings should be few and far between.

Finally, I want to say again, the closer the coöperation between internist and surgeon and the more each knows about the other's problem, the larger the number of these afflicted people who will be given a little longer span of life.

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SUPPURATIVE LABYRINTHITIS WITH CASE REPORTS

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In reviewing the subject of labyrinthitis I was struck by the fact that practically nothing on this subject has been reported before the Academy of Oto-Laryngology in the past five years. Moreover, all the work that has appeared before other special societies, or in the reports of the Year Book or the recent textbooks on otology, are in virtual agreement with the principles outlined by the Vienna School so ably represented by Barany, Neuman, Alexander and Ruttin. It speaks well for the thoroughness of the work done in Vienna that Ruttin's "Monograph on Diseases of the Labyrinth" twenty years after its publication is still a reliable treatise on the labyrinth and in full accord with recent textbooks on this subject.

The postulation that the changes in the labyrinth could be explained best by the theory that there was a circulating fluid in the semicircular canals, has borne the test of time and is quite generally accepted today. The classification of the Vienna school of four groups of labyrinth cases has not been much improved, namely, (1) circumscribed labyrinthitis, (2) diffuse serous labyrinthitis, (3) diffuse purulent manifest labyrinthitis, (4) diffuse purulent latent labyrinthitis.

The first case is a man, age thirty-eight, who had chronic double mastoiditis for twenty years. The discharge was intermittent, would disappear for months at a time and never showed any severely acute symptoms. Some nine years ago, when the discharge had been quite profuse for several months, I advised operation, but at about that time the patient developed a melano-sarcoma of the shoulder and I did not wish to operate until this growth was entirely under control. By that time the ear discharge had ceased. For the last six years there has been a vegetative dermatitis of each auditory canal which had persisted for years in spite of treatment.

In November, 1931, this patient developed a very severe vertigo, with dizziness and vomiting. There was no headache. He had been examined at one of the clinics and nothing pathological had been found. However, the ears were only superficially examined. My first examination was on November 8, 1931, five days after the onset of the dizziness. Hearing tests on that date were as follows:

Right ear	Forks 256 D. v.	Left ear
70 seconds	Bone Cond. normal 60 minutes	80 seconds
85 seconds	Air cond. normal 140	Not heard
Minus 80 seconds	A fork 96 D. v.	Not heard
Minus 12 seconds	C fork 2048 D. v.	Minus 42 right
5 inches	Watch, normal 60 seconds	Light contact

There was a spontaneous rotary mystagmus to the right, worse on looking to the right. Fistula test was negative for each ear. There was no hearing in the left ear when a Barany noise apparatus was used in the right ear. There was a polyp in the left canal near the tympanum, but very little discharge.

Irrigating the left ear with hot water, temperature 110, gave almost complete cessation of the spontaneous rotary nystagmus to the right. Hot water was used as the patient already had a rotary nystagmus to the right. Ten turns to the right gave a slight horizontal nystagmus to the left for ten seconds. Ten turns to the left gave strong horizontal nystagmus to right for twenty seconds. A diagnosis of localized labyrinthitis was made and the patient was sent to Grace Hospital, where he was kept under close observation. He entered the hospital November 9, 1931, with a temperature of 99.4, pulse 70, respiration 20. The temperature continued about this level, being under 99.8, until the day of his operation, November 20.

A spinal puncture on November 9 showed clear fluid, globulin negative with 10 cells per cu. mm. of the small mononuclear type. Smear and culture were negative for organisms and the Wassermann on the fluid was negative.

An examination of the discharge from the ear was negative for tuberculosis.

The blood count showed 14,555 white cells, 73 per cent polymorphonuclears, 5 per cent eosinophils, with 22 per cent mononuclears.

A general examination revealed a normal chest and abdomen. There were several bad teeth, two of which were abscessed and were removed. The extraction gave only temporary relief of his pain. The nasal accessory sinuses were normal by x-ray and clinical examination.

An x-ray examination of his mastoids resulted in the following report: "On the right side we find evidence of a chronic otitis media and mastoiditis, which at present shows no sign of activity but marked evidence of sclerosis. On the left side we find the presence of a chronic otitis media and mastoiditis with extensive changes of an active osteomyelitis and considerable destruction of the alveolar process. The etiology of these infections of course cannot be determined from the roengenographic appearance, neither could we rule out or ascertain the presence of a cholesteatoma." (H. A. Jarre, M.D.) I had asked in particular for a diagnosis of the possible presence of a cholesteatoma.

Soon after entering the hospital he developed severe pain in the left mastoid area, but the dizziness became less. On November 16 there was still a slight response from irrigating the left ear with cold water, but hot water gave no result. A consultation with our neurologist, Dr. Hershey, showed symptoms of mild meningeal irritation of the middle fossa of the left side.

There was also a slight facial nerve weakness.

The spinal fluid examination on November 16 showed 13 cells per cu. mm., all small mononuclears,

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and the tests were negative for globulin. The fluid was clear under normal pressure and the culture was negative.

On November 19 we could get no response from caloric irrigation of the left ear. The facial paresis was very evident and the pain was more severe.

A radical labyrinth operation was advised and was performed the following day, November 20.

The mastoid bone was opened with an electric drill, rongeur and curette, no mallet being used for fear of setting up a diffuse meningitis. The bone was sclerosed and of bony hardness.

There were a few cells full of pus in the mastoid tip and some granulation back of the lateral sinus. Otherwise the mastoid area was dense solid bone.

The antrum was entered and found filled with a cholesteatoma which had eroded the posterior semicircular canal; had eaten through the posterior wall of the auditory canal at the spot where I had noted the polyp. There was also an exposure of the dura of the middle fossa, which was thickened and was dense white.

A radical mastoidectomy was completed and I found the facial nerve exposed in its horizontal portion, but it was inatct.

The procedure of Neuman for opening the labyrinth was then carried out, the exposed opening into the posterior semicircular canal being enlarged until a bent probe could be passed forward into the vestibule. The foramen ovale and foramen rotundum were found filled in with dense bone. With a chisel these were opened to the first turn of the cochlea, so that the probe could be passed back to the posterior opening of the posterior semicircular canal previously made.

A Panse plastic flap was used, the upper flap being sutured. The wound was packed with iodoform gauze.

The laboratory confirmed the presence of cholesterin crystals.

The postoperative course was uneventful except for a peculiar mental spell one night five days after the operation. It passed off easily and the neurologist regarded it merely as a neurosis.

Nine days after the operation the patient was up in a wheel chair and in two weeks had left the hospital.

There was a slight persistent discharge from the region of the labyrinth for some months, but this eventually ceased, after two or three small sequestra of bone were removed. The facial paralysis, which became complete immediately after the operation, gradually improved with the use of the rapid sinusoidal current, and at the present time there is full use of the facial muscles.

It is rather interesting that the vegetative dermatitis of the canal entirely cleared up in the left ear, although there has been no change in the canal of the right ear.

The second case is a girl, age nine, who developed an abscess in her right ear January 28 following an acute cold. The drum was red and bulging; the temperature was 102.5; a free paracentesis was done, which was followed by free discharge. In spite of careful treatment the case went on to mastoiditis, with pain, tenderness to pressure and redness of the mastoid region. The right mastoid was operated on February 9, when pus, granulations and breaking down of the mastoid cells were found.

Two days later the temperature was normal, but it ran up to 103.4 on the twelfth. It was normal on the thirteenth, fourteenth and fifteenth, until late in the evening. At this time we noted for the first time a spontaneous rotary nystagmus to the left side. Then rather suddenly there developed a positive Kernig, neck rigidity, dizziness and severe headache, with complete loss of hearing and absence of caloric response. The patient was delirious, with the tpyical sharp crying of meningitis.

A spinal fluid examination showed a very turbid fluid under pressure and containing 3,400 cells per cubic mm., chiefly polymorphonuclears. The smear showed some bacteria reported as doubtful pneumococci.

I diagnosed an acute suppurative labyrinthitis with beginning meingitis and advised a radical labyrinth operation. The child was operated on twelve days after her mastoid operation. The old wound was enlarged and a radical mastoid operation was performed. The lateral sinus was exposed and found normal. The bone anterior to the sinus was then gradually removed with a gouge and curette until the posterior vertical semicircular canal was found. The opening was enlarged until a curved probe could be inserted forward into the vestibule.

There was a necrotic fistula in the horizontal semicircular canal. The oval window was then enlarged downward and forward with a chisel, a Panse plastic was made and the wound packed with iodoform gauze. The temperature went to 104 the following day. We used daily spinal fluid drainage and followed this by injecting a solution of colloidal silver. This last I have since discontinued, feeling that the spinal fluid drainage was the chief factor in recovery.

There was a very profuse discharge of cerebrospinal fluid from the ear, so that the bandages were continually kept moist, requiring frequent removal of outside dressings. The patient had rather a stormy course, quite normal for a few days and followed by spells of pain, restlessness, high temperature and some delirium. The peak of these relapses was two weeks after the labyrinth operation, when the temperature rose to 104. From then on the patient gradually improved and was two weeks later discharged from the hospital. She has remained well ever since, but of course is totally deaf in the operated ear.

In the second case reported, I believe there will be no difference in opinion as to the procedure that should be followed. There was a definite mastoiditis which was operated twelve days after the onset of the otitis media. In spite of a free opening in the drum and thorough exenteration of the mastoid cells, a fistula into the horizontal semicircular canal developed with a consequent suppurative labyrinthitis. At the time of the mastoid operation there was no evidence of labyrinth invasion, although no fistula test was made. Many feel that the fistula test is not without danger in such cases. When the labyrinth became infected, it progressed very rapidly to a diffuse suppurative labyrinthitis which immediately invaded the meninges. All are agreed that a radical labyrinthectomy is then indicated. Fortunately such acute cases are rather rare. However, I fear that in the acute otitis men-

ingitis, there may be more invasions through the labyrinth than statistics would indicate.

In the first type of case there are still differences of opinion as to the procedure to be followed. First, let us set up the facts as we can gather them. Various authorities* agree that 62 per cent of all chronic discharging ears that result in labyrinth infection are complicated by cholesteatoma. The differentiation of serous and purulent labyrinthitis may be impossible. Uffenorde does not agree that total loss of function of the labyrinth is in itself an indication for labyrinthectomy. He feels that invasion of the meninges only, justifies operation on the labyrinth. Many disagree with this.

Bruenings calls attention to the difference of opinion as to what constitutes the normal cell count of the spinal fluid.

Lund† regards three lymphocytes per cubic millimeter of spinal fluid as indicative of intra-cranial complication (meningitis). He reports further that in more than one-half of the cases in which fistula occurred the patients were infected with meningitis before symptoms of diffuse labyrinthitis appeared and before there was complete abolition of the functions of the labyrinth.

In this first case, I diagnosed a localized labyrinthitis because we could still get a response to caloric stimulation. I did not deem it wise to operate on the mastoid for fear of spreading a localized infection. However, when the process extended so that the function of the labyrinth was dead to sound, turning and caloric irrigation, when the spinal fluid examination showed a continued and even slightly increasing cell count, even though the increase was only from 10 to 13, and when we were getting evidence of involvement of the left temporofrontal area, I felt that some operative procedure was indicated.

Formerly, I thought the profession rather united in the position that operation is contra-indicated in the acute stage of localized labyrinthan infection in chronic discharging ears. However, this position has been changed in the past few years. It is not easy to determine clinically just when the localized labyrinthitis has become sufficiently walled off to render a mastoid operation safe.

In corresponding with various authors, I found some difference of opinion, with the majority favoring immediate mastoid surgery when the labyrinth shows symptoms of invasion in the chronic mastoid. Their argument is that the causative factor in the labyrinth invasion is the mastoid infection. Therefore, the sooner the mastoid infection is removed, the better is the chance for the recovery of the labyrinth. Personally I feel this is a sound position. As long as the labyrinth is still responsive to stimuli, the mastoid only is operated—either a simple mastoidectomy or a radical, as conditions may demand.

When the infection in the labyrinth has become total, as indicated by absolute loss of hearing, absence of response to turning, caloric irrigation and fistula tests, there is small possibility of there being any recovery of hearing. There exists considerable difference of opinion also as to what procedure should be followed at this stage.

One group emphasizes the fact that the next step in the progression of the labyrinthitis is involvement of the meninges, which may easily prove fatal. Therefore, to prevent this, they are inclined to do a radical labyrinth operation just as soon as the tests indicate total destruction of the labyrinth. I favor this view. However, the severity of the symptoms may be taken into consideration to modify our view in the individual case.

The second group stresses the fact that it is often impossible to differentiate positively a diffuse serous from a diffuse suppurative labyrinthitis. Therefore, they prefer to wait in the hope that the lesion may prove to be a serous labyrinthitis; or if suppurative, that it will be limited entirely to the labyrinth and end in recovery. That this result occurs at times there can be small doubt; however, it appeals to me as being the more dangerous procedure.

The difference between the two views accentuates the importance of early recognition of meningitis. It is universally agreed that the examination of the spinal fluid offers the most accurate gauge as to involvement of the meninges.

According to Kolmer the normal pressure of the spinal fluid is from 100–200 mm. of water and the cell count may vary from 0 to 10, although Lund claims three lymphocytes per cm. is indicative of intra-cranial complications. Globulin and albumin are absent

†Lund: Ztschr. t. Hals Nasen-u Ohrenh., 1927-28.
*Turner, A. L., and Fraser, J. S.: Jr. Laryng. & Otol., 1927.

and the quantitative protein varies from 15 to 40 mg. per 100 c.c. In meningitis there is marked increase of pressure, the fluid becomes cloudy up to thick pus and a coagulum forms. The cell count increases, chiefly the polymorphonuclears; the count may run up to 5,000. Globulin and albumin are increased and the quantitative protein is increased from 40 mg. to 5,000 mg. per 100 c.c. Sugar is reduced and the colloidal gold gives the meningitic curve.

The advanced case of meningitis offers but little difficulty in the spinal fluid interpretation. The earliest stage may show very mild changes and it is essential that a very complete examination of the spinal fluid fluid should be made to note these very early alterations.

PERNOSTON AS A PRE-ANESTHETIC*

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No attempt will be made in this paper to discuss the now somewhat voluminous bibliography of pernoston. A few introductory remarks may, however, be advisable.

The chemistry and pharmacology of pernoston may be read in any of the more extensive reports on the subject. Those who intend to use pernoston must remember that it is an hypnotic and amnesic agent. It is not a new anesthetic. It is not recommended as a substitute for ether or ethylene or nitrous oxide or any other anesthetic. It is recommended only as an additional instrument in the psychic preparation of the patient. Many patients will tell the surgeon that they dread taking the anesthetic more than the operation itself. I believe that I am safe in saying that the nervous tension existing at the time the patient begins to inhale the anesthetic continues to manifest its presence during the entire operation. If pernoston did nothing more than abolish the fear coincident to the operation its use would be justified. Dr. Bernhard Friedlander has written an excellent article on the theories of sleep and his suggestion of the psychic preparation of the patient for hours or even days before the advent of the operation is a good one. I do believe that too long a preparation may defeat its purpose, however.

Any anesthetic, and in this case an hypnotic, in the hands of the less qualified is dangerous. An attempt will therefore be made to outline a definite routine which, I believe, will be of value to those who are not familiar with the action and administration of pernoston:

1. If it is at all possible, the patient should enter the hospital eighteen to twenty hours before the time set for operation. In this way it is possible for the patient to become acquainted with those nurses and members of the house staff who will assist the doctor in making the patient's stay in the hospital as comfortable as possible. The patient is put to bed with bath-room privileges only. The day before operation luminal grains ¼ every four hours are given and at night luminal grains 1–½.

2. I usually tell my patients that they are going to receive an injection in the arm that will put them to sleep in bed. I explain why the drug is being used and the effect it will have upon them.

3. One hour before operation morphine sulphate grains 1/6 and atrophine sulphate grains 1/150 are given by hypodermic. In the earlier cases of this series no hypodermic was given, but since its introduction the amount of pernoston necessary to produce sleep has been reduced, and the results have been uniformly satisfactory. Some workers do not advise the use of opiates prior to the injection of pernoston. We have had no ill effects from their use.

4. Just before beginning the injection I again explain to the patient the effect that the drug will have. The patient is asked to relax as much as possible and not to resist the "sleepy feeling" that will follow. As in the general practice of medicine one must

*This report covers a series of fifty cases which came under my supervision at The Fifth Avenue Hospital, New York City. Dr. Herbert C. Chase, under whom I had the privilege of working, has used pernoston in 300 additional cases. I am indebted to him for his instruction in the use of the drug and for the opportunity of writing this paper.

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attempt to win the patient's confidence. No one can over-estimate the value of a sympathetic relationship between doctor and patient.

5. After the preparation of the skin in the usual manner the injection of pernoston is begun one-half hour before operation. We have not been in the habit of administering pernoston according to body weight. The injection is given very slowly, one to two minutes being required for the injection of 1 c.c. of the drug. The more slowly the injection is given, the less the amount of pernoston necessary to produce sleep. The rate of injection should be controlled by a watch.

6. In judging the dosage of pernoston the reaction of the patient is used as a control. Most men use the maximum dosage calculated from the body weight of the patient as a control. I have no objection to this method, but in many cases it will be found that the calculated dosage is more than is necessary to produce sleep, and vice versa. A robust individual of 150 pounds may require as much of the drug as a patient weighing 125 pounds. The dosage, I believe, is more dependent upon the patient's tolerance than upon the body weight. Age, too, seems to play an important part.

The patient receiving pernoston passes through four definite stages:

1. He will first complain of a "sleepy feeling."

2. This "sleepy feeling" gradually increases. The patient, however, still responds to questions and will open the eyes completely when spoken to.

3. During this stage the patient fails to respond to questions but instead will *attempt* to open the eyes.

4. The patient fails to answer questions, there is no attempt at opening the eyes, and this is followed by a gradual relaxation of the muscles of the face causing a dropping of the lower jaw. As soon as this is noted the injection is stopped. After about one-half minute ½ to 1 c.c. more of the drug is injected.

These stages are by no means sharply demarcated but are nevertheless easily demonstrated. The sleep that follows cannot be distinguished from natural sleep. There is absolutely no danger of giving too much pernoston if the reaction of the patient is carefully watched. I would advise those who intend to use pernoston to obtain first-hand information and instruction from someone experienced in its use. After such preliminary instruction one is better equipped to alter the technic to suit one's own likes and dislikes. One who has never used pernoston cannot expect to obtain the same uniform results as someone who has used the drug for a considerable length of time.

Pernoston sleep varies in length from two to six hours; the patient, however, remains drowsy the greater part of the day of operation. The immediate post-operative shock is greatly reduced, and the amount of sedatives necessary to control pain is greatly reduced. Upon regaining full consciousness the patient does not remember anything that has taken place since the administration of the hypnotic.

I have never given less than 4 c.c. nor more than 5.8 c.c. of pernoston at any single injection. It has never been necessary to resort to caffeine-sodium-benzoate, adrenalin, ephedrine or any other form of stimulation. There has never been any accidents or any harmful effects on the patient.

The amount of anesthetic administered during the operation is greatly reduced when pernoston is used. In many cases no ether is necessary; ethylene or nitrous oxide being all that is necessary to produce surgical anesthesia and relaxation. The induction of general anesthesia is smoother and faster. There is usually no straining or "fighting the anesthetic." The excitement stage is usually absent. Relaxation is more rapid and is obtained with much smaller quantities of anesthetic.

Recovery from the general anesthetic is much smoother when pernoston is used. The patient sleeps through the greater part of the immediate postoperative discomfort, and after regaining full consciousness requires less sedatives for the control of pain. Except for drowsiness, the patient complains of no ill effects from the pernoston sleep.

Many observers claim that postoperative nausea and vomiting are decreased, if not entirely absent, after pernoston. This has been true in this series of cases. I do not intend to discuss the etiology of the distressing conditions in this paper. I do believe, however, that other factors are just as important in the control of postoperative nausea and vomiting as the type of anesthetic used. A careful and diligent adminis-

tration of the anesthetic, or, as in this case, of the hypnotic, plays no doubt an important part.

As regards the effect on the blood pressure, pulse and respiration, our results compare favorably with those reported by other workers. There is no appreciable change in the blood pressure. One cannot say, however, that the blood pressure remains unaltered. There is a slight variation in the tension as shown by the rapidity with which the color returns on blanching the skin of the forehead on pressure. A drop of 5 to 10 mm. of Hg. is the most that has been noted. The respirations may be somewhat slower but of greater depth. (This may be due to the morphine.)

In closing, let me add that pernoston has still another place in medicine. In two cases I have used pernoston to control very severe pain when other sedatives failed. The first was a case of far advanced Berger's disease. The patient had been receiving large amounts of morphine and pantopon to control the spasms. During one attack the pain was so severe that morphine intravenously failed to relieve the patient. Small injections of pernoston were given and the patient received the first sleep he had obtained in several hours.

The other case was one of renal colic. Only slight relief was obtained from the use of morphine, atrophine and pantopon. The patient was very sensitive to opiates and developed a very severe pruritus from their use. Pernoston was resorted to with favorable results. Those who have suffered a great deal of pain will say that the memory of pain is often worse than the pain itself. In these two cases the patients were spared such memories. They remembered nothing regarding the attack of pain and were exceedingly grateful.

CONCLUSIONS

1. Pernoston is a preparation which when given intravenously produces a state of unconsciousness closely resembling sleep.
2. Pernoston is not suggested as a substitute for any general anesthetic.
3. Pernoston is an hypnotic which may be used as an additional instrument in the psychic preparation of the patient.
4. Pernoston in qualified hands will not produce any ill effects on the patient. In this series of cases there have never been any postoperative accidents nor any fatalities. Stimulants have never been resorted to.
5. Pernoston may also be used to control very severe pain.

THE OPERATION OF STERILIZATION

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FLINT, MICHIGAN

The menace of the increasing numbers in our population of the feeble-minded is one of the most challenging problems of civilization to-day. The increasing number of mental defectives imposes a tremendous economic burden on the state and its components, to house and support them. An adult with an intelligence below that of a nine year child is without doubt in the class of the feeble-minded, and their number in the United States cannot be less than one million, who are thus incapable of social adaption.

Many students of population are alarmed over the increase in the number of the insane and the feeble-minded. The Human Betterment Foundation estimates the total number of mental incompetents at eighteen millions and warns of the impending danger of race deterioration. Be the increase real or apparent, the facts show a steady increase of the number requiring institutional care. Urbanization with the keener struggle for existence may be a factor in producing an increase of cacogenic cases. The Human Betterment Foundation says, "Careful studies indicate there are six millions in the United States who have been, are now, or at some future time will be legally committed as insane to state institutions . . . There are six millions additional cases who are not mentally diseased, but are so de-

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ficient in intellect with an endowment in this respect that is more than 50 per cent below average that they are often described as feeble-minded. The number who suffer from incipient mental disease sufficient at some time to incapacitate them for work but who are never legally declared insane is about as great." These figures are in accord with the results of the American Army test which showed 17.6 per cent of the white drafted men had only the mental age of children of eleven years of age, which percentage applied to the general population means nineteen millions in America who may require control. These alarming figures have earned for their reporters the name of alarmist eugenists. No matter what may be the true number of the mentally incompetent, less than 12 per cent of the feeble-minded have such mental or temperamental stability as to be eligible for parole. This means that the majority committed to state institutions are permanent guests of the state. Another interesting comment is that while 87.7 per cent of the population of our institutions are natives, 12.3 are of foreign birth, but the foreign born have the disportionate rate of five times as many as their percentage of native population.

The British Medical Association appointed a committee to report the medical problem presented by mental deficiency, especially methods to reduce its incidence. The report rendered last year considers heredity as playing an important part but no estimate was made of the percentage due to heredity and concluded there is no single genetic basis of mental deficiency. Some feeble-minded are socially defective. Some may present considerable scholastic incapacity but may be socially capable. The committee recommends that the education and training of mental defectives to the full extent of their powers; that suitable defectives be placed within the general community and that those socially incompetent (anti social) be examined for mental defectiveness and if so found be placed in colonies.

As to sterilization the committee reported that, "if this should be applied only to certificable mental defectives the incidence would not be appreciably reduced. That to be really effective the operation would have to be applied to many who are not certificable mental defectives, because there are a large number of Mendelian 'carriers now at large in any community.' "

While it is true that the results of sterilization are negative, it can be easily seen that in two cases I sterilized one day, that the state could have saved much expense. One woman had had ten children, all feeble-minded. The other woman was the mother of eight. I submit that had these two cases been recognized and sterilized before the birth of these children the state would have been spared the care of eighteen children. Neither of these had passed the child bearing age and we may rest assured that they will not bring any more children in this world.

Only two effective methods of control and prevention are available. They are segregation and sterilization. There is no cure for feeble-mindedness. Segregation requires buildings, equipment and personnel. The Michigan Home now has 3,800 patients and 800 on the waiting list. Sterilization is the only prevention. Birth control is hardly worth consideration in these cases.

Whether the laws of heredity are thoroughly known or not, sufficient evidence is available that heredity is a factor, the largest discoverable cause of mental deficiency.

If all human breeding could be controlled there would still be cases of feeble-mindedness it is admitted. Sterilization is not a panacea because the condition is widespread throughout society. This does not mean we should fold our hands and let nature take her course.

Twenty-seven states now have sterilization laws. The legal status of sterilization has been established by our highest courts. Castration on the other hand has been held to "be unusual punishment" by the federal courts.

OPERATION

The following technic has been used by me in 700 sterilizations since 1921. It is a hystero-salpingectomy. No operation should be considered which does not resect both tubes.

In a female a 3-inch low midline incision is made or a Pfannenstiel incision may be used. The finger and thumb of the left hand are introduced into the abdomen grasping the left ovary and tube. Occasionally with a small retro-flexed uterus it is necessary to use a tenaculum hook to bring

the uterus up into the wound. While an assistant makes traction on the tube, a curved pair of hemostatic crushes the horn of the uterus, a curved pair of scissors clips off the horn of the uterus, making certain the excision is carried down into the uterine muscles. This wound in the uterine horn is closed with a No. 5 Emmett needle threaded with chromic catgut. One and one-half inch of the tube then is excised. A needle is introduced throughout surface of the broad ligament below the round ligament which next picks up the proximal end of the tube and the needle is then passed back through the broad ligament. By traction of this suture the new proximal end of the Fallopian tube is brought into contact with the posterior surface of the broad ligament. The suture is then tied. This operation is repeated on the opposite side.

We found that in patients who had borne children that occasionally this technic would result in troublesome hemorrhage from the wound in the uterus. In these cases a double salpingectomy is preferable. In California Dr. Margaret Smyth devised an operation in which the Fallopian tube is grasped by two Allis forceps placed one and one-half inches apart which is the amount of tube usually removed. An incision is made through the peritoneal coat and the mucous and the muscular coats removed. The stumps are cauterized with carbolic acid and the two ends of the peritoneal surface are ligated, a silk ligature being used around the tube close to uterus. The peritoneum is sutured over this empty space. The difficulty with this procedure is that the tissues do not readily separate.

There has been one pregnancy following the hystero-salpingectomy operation but in this case a second operation revealed what appeared to be a one normal tube. It does not appear possible for a pregnancy to occur if this operation is carried out in full detail. The operation is simple and can be done inside of fifteen minutes.

In the male the operation is much simpler. An incision is made over the vas deferens as it is held between the thumb and finger. The vas feels like a small wire, and when reached peels out easily and at least one and one-half inches are excised. Interrupted chromic catgut suture including dartos and skin are inserted and the operation on the opposite vas is done in an identical manner.

After-care is ten days in bed in case of females and a week for males.

In this series of 700 cases, nearly all of which were done at the Michigan Home and Training school at Lapeer, Michigan, there have been two deaths. One case died suddenly one week after operation probably due to embolus. The other case was an idiot who should never have been ordered sterilized, who died four hours after from respiratory failure. General anesthetic.

Since the operation of sterilization is elective as to time, certain precautions should be taken. Examination of the throat and smear from both throat and vagina are taken. No case is operated that has a fever from any cause. The usual urinal examination and white blood cell counts are made. Wassermanns are taken as a routine. In the male the bleeding and coagulation time are taken. With these precautions the operation should carry no mortality.

CONCLUSION

Sterilization being a negative eugenic measure it is not a panacea to eliminate all mental cases because mental cases are too widely spread in our population.

The idiot and the imbecile do not need to be sterilized but do require institutional care. The pathological basis for amentia is not in gross appearance but in a microscopic arrest of brain cells.

If all human breeding could be controlled there would still be cases of feeble-mindedness.

Segregation and sterilization are the only two effective preventive measures. Birth control is of little value in this class of patients.

The operation of sterilization by hystero-salpingectomy is easily done, is effective and should carry no mortality.

Only those about to be paroled from state institutions should be sterilized. Sterilization should also be done outside state institutions, where proper authorities request it.

There are no deleterious after effects and the operation does not promote sex delinquency.

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, M.D., Dr.P.H., Commissioner
LANSING, MICHIGAN

COMMUNITY SANITATION UNDER THE CWA

Rural schools of Michigan are profiting by the Community Sanitation project being carried on under the CWA, known officially as Federal Project No. 133 J. The United States Public Health Service has national supervision of the program, with the administration in Michigan delegated to the Michigan Department of Health. All expenditures of funds are made directly by the State Emergency Welfare Relief Commission.

So far as the State Department of Health is concerned, the major emphasis of the project is being placed upon the construction of sanitary privies, with the safeguarding of wells, the draining and grading of school grounds, and the improvement of ventilation as secondary objectives.

A county supervisor, working in close collaboration with the local CW administrator and the County Commissioner of Schools, makes a survey of the work already proposed in his county and the needs of the rural schools. Each county is urged to have not more than two or three projects, grouping many schools together, so that the laborers may go from school to school in one crew. After a plan is approved locally it must secure the authorization of the State CWA. Labor is then assigned from the quota of about 600 men allowed for this project. This labor quota is over and above that already given to each county, so that when laborers are authorized for the community sanitation work they can be added to the regular county quota.

General direction of the project in Michigan is under two assistant directors, one for the northern and one for the southern part of the state. Fourteen district supervisors work closely with 80 county supervisors. Neither clerical nor office expenses are allowed the county supervisors since that would take away from the labor quota.

The date of February 15 has been set as the deadline for construction work under this grant, so every effort is being made to get the program in operation speedily.

AMEBIC DYSENTERY

Since our account of last month, approximately 25 cases of amebic dysentery have been reported to the Michigan Department of Health. The total from August 1 of this year to date (January 15) is 54.

With only two or three exceptions, these cases have given a history of visiting Chicago, and nearly all of them stayed at the one hotel which has been traced as the source of a great many other cases.

In the smaller towns and rural territory of Michigan very few cases are being discovered. This no doubt is due at least in part to the lack of laboratory facilities in such districts. Attention is called to this to remind physicians practicing in smaller towns to be on the alert for cases having evident clinical symptoms of dysentery, and to inquire about a visit to Chicago.

Approximately two-thirds of the cases reported during the last month have been from Detroit.

A TEST EXAMINATION

A test examination to serve as an indication of the nutritional status of school children in Michigan and as a basis for any program of special relief measures was carried on in the schools of a southern county from December 4 to 15.

The county in which the examination was to be made was selected by the State Emergency Welfare Relief Administrator as one of those most affected by the depression. With the coöperation of school and relief officials, ten schools were visited and 2,846 children were screened by members of the staff of the Michigan Department of Health. From this group, 787 were referred for examination. Two practicing pediatricians from Detroit assisted in giving the examinations, which included attention to muscle tone, subcutaneous fat, posture, defects of the nose and throat, dental defects, and weight.

Tabulation of the findings has not yet been completed.

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Owing to the limitation of space, preference will be given brief articles.

Manuscripts should be typewritten, double spaced, on one side of white paper 8½x11 inches. There should be a margin of 1½ inches on the left side of page.

All photographs should be clearly focused prints on glossy paper (do *not* send negatives). The standard 8x10 or 5x7 size prints are recommended.

All line drawings (charts, diagrams and sketches) are to be drawn with India ink on stiff white paper or Bristol board. Drawings are to be made with pen lines of suitable thickness to allow reduction to the width of one or two columns, as the case may be, of the Journal. Do *not* send drawings in colored ink.

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EDITORIAL...

FEBRUARY, 1934

GUARDING FOOD AND DRUGS

One of the difficulties in editing a monthly periodical is the fact that the writer is scarcely ever able to deal with a subject while it is, so to speak, hot. Editorials, timely when written, are usually produced a month before they appear in print, and during the intervening time changes may take place to modify the editor's position. We have in mind the new Food and Drugs Act which is at this time of writing under consideration by congress. The bill is "fathered" by Rexford G. Tugwell, Assistant Secretary of Agriculture. It was introduced by Senator Royal S. Copeland during the past session and referred to the Committee on Commerce. We are inclined to favor this piece of proposed legislation in hopes that it might, if nothing else, put an end to the blatant and raucous exploitation of nostrums that invades the privacy of the home over the radio. We have not seen the text of the bill so that our opinion is formed rather from a summary of its contents. The Tugwell legislation would broaden the scope of the Pure Food and Drugs Act, now in existence since 1906, so as to make unlawful all fraudulent advertising of proprietary medicines and other drugs through whatsoever medium such advertising or publicity may reach the buying public. In other words it would eliminate cheating and misrepresentation from the advertisements of drugs and medicines. If a drug were a "specific" for any disease (and every physician knows there are very few specifics) the advertisement must expressly say so. If the drug or medicine were only a palliative, the label and advertising must state so in plain language. If it is neither cure nor palliative but merely a mixture of weed juice and water with no therapeutic value whatsoever, this fact must also be set forth in terms which will not mislead the public.

We cannot see how anyone except those who have vested interests at stake could object to such legislation. It will work no hardships to the medical profession. We have no secrets that cannot be explained fully to those intelligent to understand. It will of course interfere with self-medication,

which undoubtedly does as much harm, by and large, as any benefit that has ever been derived from it. How many cases of appendicitis have proved fatal through a presumed (by the patient) innocuous dose of castor oil will never be known. Self-medication has often the effect of temporizing and postponing medical aid until it is too late to accomplish any desirable purpose.

The Tugwell measure is meeting widespread opposition. "However," comments *The Nation,* "not one of its many critics has yet brought forward a convincing answer to the major challenge of the proposed legislation. The bill is aimed solely at those quacks who prey upon a public ignorant of the complexities and phraseology of medical science. It will not hurt honest and truthful manufacturers of medicines and cosmetics. In the words of *Editor and Publisher,* which is supporting the Copeland bill: 'It is not easy to see how any producer of a legitimate product can be hurt by honest claims.' By joining forces with the quacks these legitimate producers are not only endangering the lives of thousands of people who are annually tricked into buying poisonous drugs and cosmetics but are casting suspicion upon their own integrity."

THE FREE CLINIC

A special meeting of the Wayne County Medical Society, December 20, was devoted to the economics of practice. Over five hundred were in attendance, which is a goodly percentage of the total membership, a fact we mention as showing the interest taken in medical economics as contrasted with the attitude of the profession in the no distant past. The subject which came in for major discussion was the free clinic. The discussion was likewise free and in earnest with the consensus of opinion much opposed to the extension of the free clinic and the practice of medicine by hospitals.

There is no question but that the abuse of the hospital clinic has led to the cheapening of medical service, just as those who have enjoyed the privilege of theater or railway passes are inclined to forego the pleasures of the theater or of railway travel when either involves expense. But the free clinic, which has enlarged its scope and its clientele, is already with us. Its growth has been insidious. It has become established. It has come to be looked upon as free as public education for those who want it and thousands feel they have as much right to it as to education of the young in tax supported schools. Teachers are paid, perhaps not as much as men and women of their training and character entitle them, but anyway a living wage. The tax supported hospital (municipal) pays everyone except the *sine qua non* of the hospital—the doctor. The tax exempt non-civic hospital, or any other institution, is tax supported to the extent that it is tax exempt. We see difficulties in retracing our steps in the way of restoring the abused clinic practice to the doctor, who in taxes pays for its upkeep. A resolution was passed calling for the curtailment of the free clinic. As one speaker expressed it, the profession, in the event of the elimination of the clinic must be prepared to take over the work now being done in the clinic. One large clinic in Detroit is reported to have received $82,000 for its operation, no part of which sum went to the doctors concerned. The clinics are presumed to be built up to a certain extent by the activities of social workers whose success is evidenced by the size of the clinic, which is possible through free services on the part of the doctor.

The medical profession is confronted with a serious problem. The federal relief fund is designed to pay a minimum fee for the medical care of indigents who receive welfare aid for fuel and food. The CWA is designed to restore the independence of as many as possible who have been in the welfare class by paying a minimum wage which is not sufficient to take them out of the charity group so far as medical care is concerned, in as much as food, clothing, shelter, and amusement will always take precedence over the unanticipated visit of the doctor. The Wayne County Medical Society's objective of restoring to the doctor the erstwhile free clinic patient will be observed with interest by every practising physician in the state. The writer may seem to place undue emphasis on the social and economic phase of medicine in Wayne County. The larger the center of population, however, the sooner adverse conditions come to a head. Thus, in a sense, Wayne County is a sort of experimental laboratory for the state.

PROFESSOR KAHN HONORED

The American Association for the Advancement of Science holds its annual meeting between Christmas and New Year's. Its membership consists of university professors and instructors as well as others who are interested in scientific subjects. It goes without saying, there is a section on medicine before which papers are read in which the writers have something to present that embodies the results of research.

This year the honor comes to Michigan and more particularly to Professor Reuben L. Kahn, of the Department of Bacteriology of the University of Michigan. Professor Kahn is already well known for his work on the diagnosis of syphilis. The title of the paper for which he has been awarded a prize of one thousand dollars is "Tissue Reactions in Immunity," in which the writer stresses the importance of the skin and other body tissues.

Kahn devised a method for measuring the immunologic response of different tissues of a protein-immunized animal, by determining the capacity of the tissues to combine with specific antigen. By means of this method, he found that the skin possesses an antigen-combining capacity more than ten times greater than muscle tissue, brain tissue or *in vivo* plasma, while the peritoneal tissues possess a combining capacity somewhat less than that of the skin.

Kahn immunized rabbits with normal horse serum and utilized horse serum antitoxin as the indicator in determining the specific reacting capacity of the tissues of the immunized animals. The method he employed consists of two steps. Rabbits are first immunized with horse serum in the usual way by means of two injections of this reagent intravenously. After a given period, these rabbits, as well as control animals, are injected with a standard arbitrary dose of diphtheria toxin, 50 minimum lethal dose, and a given dose of horse serum antitoxin. In control, non-immunized animals, the quantity of antitoxin necessary to neutralize the standard dose of toxin varies between 5 and 25 units, depending on the tissue wherein the antitoxin is injected. If the antitoxin is injected intravenously, 5 units of antitoxin are sufficient to save the animal from the 50 minimum lethal dose of toxin. If injected intracutaneously, 25 units are necessary to save the animal from toxin death. In the case of horse serum immunized rabbits, it is found that 1,500 units are necessary to save an animal from the effects of 50 minimum lethal dose of toxin if the antitoxin is injected intracutaneously, 1,000 units causing the animal to die from the toxin. If the antitoxin is injected subcutaneously, 1,000 units save the animal from toxin death; 750 units do not prevent death. If the antitoxin is injected intraperitoneally, 1,000 units save the animal from toxin death; 750 units do not. If injected intramuscularly or intracerebrally, 100 units save the animal; 75 units do not. If injected intravenously, 75 units save the animal from toxin death; 50 units do not save the animal from death.

The reason why horse serum immunized rabbits require such large quantities of antitoxin in order to save them from toxin death is that when antitoxin is injected in a given tissue of these animals, this reagent is prevented from diffusing into all the tissues and neutralizing the toxin. In other words, the antitoxin is presumably anchored in the area of injection, while the toxin diffuses through the tissues unhampered. This anchoring of the antitoxin in the injected tissues of a horse serum-immunized animal must be due to some combination between the local tissue and the antitoxin. The results thus indicate that the combining capacity of the skin of the immunized animals for antitoxin is more than ten times as great as the combining capacity of muscle, brain and blood plasma for the antitoxin. Since the combining capacity of the blood serum for antigen *in vitro* is taken as a measure of the immunity response of an animal, the local combining capacity of a given tissue for antitoxin, which is basically specific antigen, must also be taken as an immunity response.

Kahn argues that it is perhaps to be expected that the skin would have an unusually high immune capacity since, throughout the ages, the skin has been directly exposed to parasitic invasion. This high immune capacity of the skin expresses itself in its anchoring of bacteria and other parasites and preventing their entrance into the deeper tissues.

Dr. Kahn was invited by the League of Nations Health Committee to attend a competitive conference on tests for syphilis in in 1928. The conference was held at Co-

penhagen, and the Kahn reaction proved superior to the other methods—fourteen in all. In 1930, a similar conference was held at Montevideo, Uruguay, wherein twelve methods were subjected to a similar "competition." The official report of the Montevideo conference contains the following sentence: "The majority of serologists taking part in the Montevideo conference agreed that, in the hands of Professor Kahn himself, the Kahn 'standard' test, which (as was the case also at the Copenhagen conference) proved to be absolutely specific and extremely sensitive, was the best of those demonstrated at the conference."

In 1933 the Royal Academy of Italy invited Dr. Kahn to discuss the fundamental principles of his syphilis reaction and also his newer studies on tissue reactions in immunity. The immunological conference was held in Rome, in October, 1933.

THE CLINICAL THERMOMETER

For many centuries, fever was considered a distinct disease entity showing individual variations or differing degrees of intensity. Modern medicine, however, has relegated fever to the status of a symptom, but a most important symptom, of certain diseases. The use of the clinical thermometer has been responsible, in no small degree, for this change.

The earliest thermometer, which is now conceded to have been constructed during the last decade of the sixteenth century by Galileo Galilei, consisted of a glass tube sealed at one end and inverted over a vessel of water or wine. The liquid rose or fell as the air in the tube contracted or expanded with temperature change. Relative temperatures were thus indicated by the level of the liquid in relation to a crude scale beside the tube. With the view of permitting comparison between instruments, Sanctorius (1614) proposed that some constant, such as the temperature of snow or that of a candle flame, be agreed upon. Incidentally, he also was the first to suggest that the thermometer might be used to measure the intensity of fevers, a suggestion that was ignored for about two hundred years. The early instruments, which were first called "thermometers" in 1624 by Leurechon, represented barometric as well as thermal changes, and thus fluctuated in spite of temperature constancy. A different type of thermometer, but one which was also subject to the effects of atmospheric pressure, was that devised by Jean Rey in 1632. It consisted of a vertical glass tube dilated below and continued above in a long slender neck. When the vessel was partly filled with water, different temperature conditions changed the water level. This thermometer depended upon the principle of liquid expansion, whereas the earlier type had involved the expansion of air.

Following Torticelli's discovery of the pressure of the atmosphere, Ferdinand II, Duke of Tuscany (1641), produced the first true thermometer by sealing the tube of Rey's instrument. Within a decade, several varieties of this instrument, known as the Florentine thermometer, were devised. In these, the zero point indicated a mild summer temperature, while relative heat or cold was shown by the deviation from the zero level. Although no essential improvement was made upon the instrument until the time of Fahrenheit, scientists of the day, such as Boyle, Hooke, Huyghens and Delancé, attempted to establish fixed temperature points. Among the suggested temperature standards were: the temperature of freezing water, that of the freezing or thawing of oil of aniseed, the melting point of butter or tallow, and the boiling point of alcohol. Renaldino (1694) was the first who attempted to fix both the melting point of ice and the boiling point of water as standards of thermometric use.

During the first quarter of the eighteenth century, exceptional thermometers were devised by Daniel Gabriel Fahrenheit, a maker of scientific instruments in Amsterdam. In his thermometers, a cylindrical fluid chamber was used in place of the spherical bulb of the older thermometers, and both mercury and alcohol were employed as thermometric liquids. Fahrenheit used three fixed points in the calibration of his thermometers: the temperature of a mixture of ice, water and sal-ammoniac, the temperature of a mixture of water and ice, and the temperature of the human body. According to an arbitrary scale which he devised, these points coincided with 0°, 32° and 96° respectively. When this scale was

lengthened, it was found that the boiling point of water registered 212°, and, in some thermometers, measurement could be made as high as 600°, near the boiling point of mercury. The popularity of Fahrenheit's thermometers was due largely to their accuracy and superior workmanship. Two thermometers preserved in the Leyden Museum, when compared with one another, registered the freezing point of water within a tenth degree.

A thermometer, which has been more widely used in Germany than elsewhere, was devised by Réaumur in 1730. Réaumur found that one thousand parts of an 80 per cent solution of alcohol at the freezing temperature of water expanded to one thousand eighty parts at the boiling point of water. On the basis of this expansion, therefore, he proposed a scale of eighty units. This scale, together with the modified Celsius scale, is used today along with that of Fahrenheit. Andreas Celsius divided the distance between the freezing and boiling points of water into one hundred units, zero representing the higher and one hundred the lower temperature. Within a few years, the scale of Celsius was reversed by Chester and Sturmer and persists with slight modifications as the centigrade scale. Due to subsequent refinement in definition and in methods of standardization, the three scales have all been modified, though in principle they are the same as those outlined by their inventors.

In spite of the extensive use of the thermometer in many fields of science during the eighteenth century, the instrument was little used in medicine. Pioneer studies on the clinical application of the thermometer, however, were made by Boerhaave (1731) and his pupils, Van Swieten and de Haen. Observations by these men and others revealed several laws of clinical thermometry: that body temperature was relatively constant despite wide fluctuation in environmental temperature, that disease and age produced modifications, and that temperature was increased locally by inflammation. Regardless of these hopeful discoveries and of the emphatic recommendation of the use of the thermometer by James Currie (1797), the thermometer was largely ignored in medical practice.

This condition was due to an almost complete ignorance of the physiological basis of animal heat and of its variations. Before medicine could use the thermometer effectively, it awaited the discovery of oxygen by Lavoisier (1780), and the investigation of its importance in the animal body; it required the fundamental studies of Liebig (1842) on the chemical relationships of food and oxygen; it demanded the discovery by Helmholtz (1846-48) of the relation between muscular work and heat production, the recognition by Mayer that body heat was due to chemical processes in the body, and the enunciation of the mathematically exact relationships between heat and mechanical power by the physicist, Joule. As these discoveries accumulated, medical men were provided with a means of interpreting thermometric data.

The significance of clinical temperature variations in the body was first outlined by Andral (1841) and Gierse (1842); it was further emphasized by the thermometric studies of Traube (1850) and Barensprung (1851). Stimulated by these workers, Wunderlich, a professor at Leipzig, began to collect accurate thermometric data on all the stages of more than a score of diseases. After nearly twenty years, the thousands of observations of this man and his associates were collected and summarized in 1868. Wunderlich's book, more than any other factor, firmly established the importance of the thermometer as an aid in diagnosis, and as a guide in following the course of disease.

Until the latter third of the nineteenth century, the thermometers used by physicians were those designed for chemists and physicists. When such thermometers were adopted for medical purposes, it was necessary that they remain in position for a long time, and that they be read *in situ*. In addition to these inconveniences, their size limited them to hospital use. Professor Phillips of Oxford in 1851 modified the thermometer by constricting the tube directly above the bulb. This constriction served to detach various lengths of the indicating mercury column so that the highest level reached was retained. The self-registering principle of Phillips's maximum recording thermometer was incorporated in the first satisfactory medical thermometer about 1860 by William Aitken. He also reduced its length to ten inches. Various modifications were now made in the thermometer bulb to facilitate

its use in different parts of the body: it was spherical for recording axillary temperature, flat for skin temperature, and cylindrical for oral, vaginal or rectal temperature. In 1867, Clifford Allbutt designed a self-registering thermometer less than six inches long; this was the first pocket thermometer, an instrument, the use of which could be extended beyond the hospital. Some time later, pocket thermometers were constructed with scales etched on the tube and with magnified indices. These thermometers have remained practically unchanged except that the elongate constriction associated with the self-registering feature has been modified to an S-shaped configuration. During the period from 1860 to 1890, the clinical thermometer developed from a clumsy device to a scientific implement; likewise, it changed from an occasionally used instrument to one of world-wide application. —W. T. D.

MEDICAL ECONOMICS*

LEROY W. HULL, M.D.
DETROIT, MICHIGAN

The question of medical economics has within the past few years become a major problem to each and every one of us engaged in the practice of our profession. It behooves us all to become conversant with its major problems. That there are great social changes taking place in our body politic must be evident to you all. The commission on medical education of American Medical Colleges has recognized these changes and the new demands that are being made on the medical profession and urges increased training of physicians in sociology and economics. There is a definite lag between the knowledge of medicine that is available and the delivery of that knowledge to the public, its potential consumer, and the medical profession has been severely criticized because of that fact. You all know that to be true and even though we stand ready to do our part, if the public will let us, that does not save us from criticism any more than we excuse those in charge of our government for the recent wholesale slaughter and burying of hogs while we as taxpayers are buying meat for the 250,000 persons being fed at public expense in Detroit. That has been one of the reasons given for various schemes for the reorganization of the methods of medical practice by philanthropists, economists, sociologists, socialists, public officials, insurance agents, etc. That the promoters of some of these schemes have not always had behind them the altruistic ideas expressed we know and we also know that the so-called reformer is usually congenitally possessed of a one-track mind. However, it is up to us to recognize that control of medical practice is being sought by outside agencies and to be ready. It should be a matter of pride to us all that our colleagues in this state have been awake to what is happening and are taking steps to protect the profession in Michigan through the Survey Committee of the Committee on Medical Economics of the Michigan State Medical Society. Their report and the so-called Michigan plan is being studied throughout the country. All of us should familiarize ourselves with the findings and features of this report and talk about it to our lay friends.

It is perfectly evident with its present financial returns from the practice of his profession, there can be no continuation for the physician of the position in society which he rightfully believes he should hold in return for the quality and quantity of service he gives to society. I feel that unless a real effort is made by physicians themselves, and this means organization through and by themselves, that a good many features of the majority report of the Committee on the Costs of Medical Care will be put into effect and they will be the least desirable and lead to lay, hospital, local and state governmental domination.

There are those who would have us believe that the medical profession in this country is overcrowded and that the inexorable law of supply and demand is at work. We should, therefore, close our medical schools for a period of years and allow the demand to catch up with the supply.

Let us look at some of the various things that are being done and that it is proposed doing to the physician, to this man of medicine, and his practice.

The majority report of the Committee on the Costs of Medical Care reached these conclusions: First, "that medical service, both preventive and therapetuic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists and other associated personnel, organized preferably around a hospital, for rendering complete home, office and hospital care"; and second, "that the costs of medical care be placed on a group-payment basis, through the use of insurance, through the use of taxation, or through the use of both of these methods." This is state medicine.

Perhaps there are many of you who are still laboring under the delusion that rugged individualism is still the big factor in the practice of medicine. In New York State two-thirds of the hospital beds are owned and operated by the state. Fifteen per cent of the population in 1932 received all necessities of life from public funds, including medical care. The Temporary Emergency Relief Act passed in 1931 placed medical care, food, clothing and shelter on the list as "necessities of life." The provision of such care is made an obligation on state and local agencies charged with unemployment relief. It also recognizes that persons, families, otherwise self-supporting, may be unable to pay for medical service and are to be entitled to that service, seeking thus to prevent them from becoming public charges for lack of medical care. Practically all cases of mental disease and tuberculosis, 50 per cent of venereal disease, the care of crippled children and school children are now an obligation of the public as far as medical care is concerned in New York State. Counties and cities have been authorized to construct and operate general hospitals at which citizens may obtain treatment free or for as much as they can afford to pay. So you see how far the socialization of our profession has gone.

We will take up the entrance of various laymen and lay organizations such as insurance companies as intermediaries between the physician and his patient briefly and only to condemn the practice. These forms of medical practice are prevalent par-

*This article expresses the author's view and is in no way inspired by nor is it a presentation of the Committee on Economics of the Michigan State Medical Society. It was presented before the staff of the Receiving Hospital, Detroit.

ticularly in the far west. The set-up of the "Columbia Casualty Company," a subsidiary of the Ocean Accident and Guaranty Company, Limited, of London, England, is fairly typical and is based on the insurance plan. If we accept the general concept of insurance, it is perhaps hard to criticize from the standpoint of the layman who wishes to avoid the excessive expense of a severe illness and its results on self and family. He wishes with the monthly payment of a stated sum to be freed from that worry. He wishes to budget the item of medical expense. In the case of the Columbia Casualty Company referred to, payments for medical service are provided for by setting aside 45 per cent of all premiums for medical service aside from hospitals and 12.5 per cent for hospitalization. This leaves 42.5 per cent for promotion, organization, sales, administration and profits. Physicians are signed up and paid according to a fee schedule with an office visit without treatment as one unit. Other procedures are multiples of this one uit. This is according to the French system. The average premium payment for service is given at perhaps $5.00 a month per individual. A corps of salesmen sell this insurance on a commission of 20 per cent.

Some objections to this type of organization and services are that:

1. It disrupts the medical profession in any community in which it is established. Physicians are immediately divided into the *ins* and the *outs*.
2. The scheme rests on solicitation by salesmen and profit to the managing corporation—is simply a money-making scheme to exploit the physician.
3. Brings competition by other insurance companies, cutting of rates, cheapening of medical service, resulting in
4. Reduction of pay to the physician who has lost his private practice and perhaps is afraid to cut adrift and start over again. He may feel that he has to take it and thus lose his independence, becoming merely the hireling of some big business. He loses his opportunity for self-expression not merely economically but spiritually as well. Let us not allow medicine to become infected by the methods of big business. If we must have health insurance, let the physician assert himself and be in the driver's seat.

During the past four years we have seen private hospitals as such entering into the practice of medicine, in some cases in a frankly competitive manner through insurance, due perhaps to financial troubles of their own.

The hospitals we speak of are not those owned and operated by the physician himself, the so-called private investment hospital, but the general hospital or the university hospital, perhaps, which depends on the proceeds of an endowment, taxation and contributions from community funds, for part of its means of existence. Here are the same objections as to the insurance schemes and hospitals also are open to the charge of being unfair competition to the physician as they are not self-supporting, the very individuals with whom they are in competition are helping in their support through taxation and furnish the motive power to keep them in existence. It is a legal question whether a hospital chartered "not for profit" can enter into a scheme which promises profits. There are many other objections which we cannot take up because of the time limit. However, perhaps what you have heard will stimulate you to go into this subject for yourselves as you must do.

I am not going to take up contract practice or the service rendered by our national government to veterans with non-service connected disabilities. You are all familiar with both of these forms of practice and are opposed to them.

Have we physicians been hard enough hit so far to realize that we are at the parting of the ways? Unorganized, individual effort will get us only what the charitably minded patient, insurance agent or government official will condescend to pay. We can, however, demand recognition and get it and a place in the sun through organization. Will you be satisfied with what some bureaucrat is willing that you may have?

HOME CARE

(Illinois State Medical Journal)

Attracted by a sign "Medical Center," I stepped into a suite occupied by two general practitioners, one holding office hours in the morning and the other in the afternoon, and a dentist who was there all day. All three worked together in the evening. This little group serving an industrial neighborhood are caring for all minor and even moderately severe cases at the office or at the patient's home. And they are doing good work.

Following a period when specialism was rampant, elaborate laboratory equipment considered essential, and hospital residence required, seemingly for every ailment, it is refreshing to find rapidly increasing emphasis placed on the value of office and home care and the quality of service that may be thus rendered to the sick person by the doctor practicing general medicine. Why should hospital expense be added to the cost of caring for a thrombotic hemorrhoid, a sebaceous cyst or a chalazion? From many sources comes the information that from 80 to 85 per cent of all ailments can be treated at home or in the doctor's office with no more equipment than a physician usually has or may have in his office or in his hand bag.

These statements are in no way derogatory to the quality of hospital service when it is rightly needed, nor to the contributions of scientific progress made by these institutions through their special staffs. They add force to the doctor's efforts to secure comfort and cure for patients in the least time and with no unnecessary expense. They emphasize the views of those doctors who believe that the development of medical science is not for its own inherent pleasure but for the good of the people and that no sick human being may ever be regarded as an "interesting specimen."

Home nursing and social service organizations have revealed how much can be done for patients outside of institutions, and with much saving to the family and also to the community. The financial costs are not the only problem; there is the recognition of the value of personal solicitude and and love in the home treatment and care of the sick. Since the personal relationship of the doctor and his patient is so valuable, much may be contributed to a patient's speedy recovery by faithful service of those vitally interested in his cure. Nor may one forget the salutary influences that react on a household and family where sickness is present and lovingly attended.

PUBLIC POLICY COMMITTEE,
Illinois State Medical Society.

Subsidized, institutionalized, medicine is based upon the conception that medicine is either an omnipotent religion or an exact science. Among the Greeks it was such a religion; among the moderns it is neither an omnipotent religion, nor an exact science.

HOWARD W. HAGGARD, M.D.

FASHIONS IN ANODYNES

(Manchester Guardian)

"Civilized man is certain to use drugs of some kind," says the writer of an article in the *British Medical Journal,* "and it is extremely lucky that he is concentrating at present on such harmless" ones. Whatever we may think of the proposition that drugs are necessary to heighten the enjoyment or relieve the tedium of civilization, it is gratifying to be told once again that those fashionable at the moment are moderately innocuous. A hundred years ago every person consumed on the average a pound each of tea and coffee during the course of a year. To-day the consumption of tea has risen to nearly ten pounds a head, while that of coffee has fallen to three-quarters of a pound. More tobacco, too, is smoked—it has risen from under one pound a year for every person in 1830 to over three pounds to-day. Against this must be set the decline in the consumption of alcohol, which has dropped (reckoning in gallons of proof spirit) from nearly five gallons in 1875 to an average of two gallons to-day. There is no doubt that this shifting of the balance from alcohol to tea and tobacco involves a definite improvement in general social habits. This medical authority refuses also to join in the recurrent scares over the high tea and tobacco consumption. He mentions certainly that "the average consumption in cases of tobacco amblyopia (an eye complaint) is only three ounces a week" (not much more than the average national consumption) and also that an individual's daily cups of tea "contain about six grains of caffein, which represents a full pharmacopœial dose." But he also adds that the "great majority of civilized people" can take these drugs regularly throughout their adult life "without suffering any demonstrable injury."

GOVERNMENT RECOVERY AGENCIES OF 1933

AAA—Agricultural Adjustment Administration
CCC—Civilian Conservation Corps
CCC—Commodity Credits Corporation
CSB—Central Statistics Bureau
CWA—Civil Works Administration
ECNR—Executive Council for National Recovery
ECPC—Executive Commercial Policy Committee
FACA—Federal Alcohol Control Administration
FCA—Farm Credit Administration
FCT—Federal Coördinator of Transportation
FDIC—Federal Deposit Insurance Corporation
FESB—Federal Employment Stabilization Board
FERA—Federal Emergency Relief Administration
FHC—Federal Housing Corporation
FHOLC—Federal Home Owners' Loan Corporation
FSHC—Federal Subsistence Homestead Corporation
FSRC—Federal Surplus Relief Corporation
NEC—National Emergency Council
NIRA—National Industrial Recovery Act
NLB—National Labor Board
NRA—National Recovery Administration
PAB—Petroleum Administrative Board
PRA—Presidential Reemployment Agreements
PWA—Public Works Administration
SAB—Science Advisory Board
TVA—Tennessee Valley Authority

—From the *Literary Digest.*

REAL VICTORS

While the voice of the world shouts its chorus,
its pean for those who have won;
While the trumpet is sounding triumphant, and high
to the breeze and the sun,

Gay banners are waving, hands clapping, and hurrying feet
Thronging after the laurel-crowned victors, I stand
on the field of defeat.

In the shadow, 'mongst those who are fallen and
wounded and dying, and there
Chant a requiem low place my hand on their pain-knotted brows, breathe a prayer,

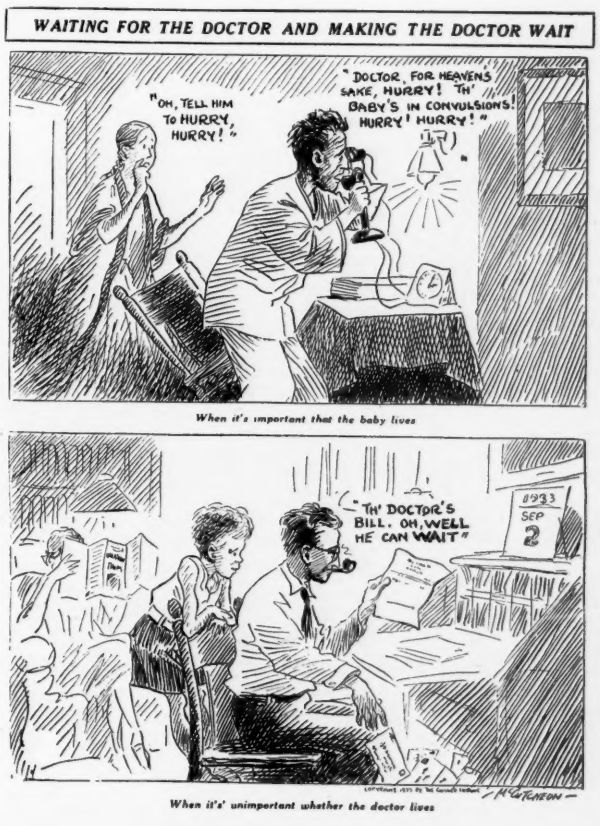
Hold the hand that is helpless, and whisper, "they
only the victory win
Who have fought the good fight, and have vanquished the self that tempts us within;

Who have held to their faith unseduced by the
prize that the world holds on high;
Who have dared for a high cause to suffer, resist,
fight,—if need be, to die."

Speak, history! who are life's victors? Unroll thy
long annals and say.—
Are they those whom the world called the victors,
who won the success of the day?

The martyrs, or Nero? The Spartans who fell at
Thermopylæ's tryst.
Or the Persians and Xerxes? His judges, or
Socrates? Pilate or Christ?

W. W. STORY.



CORRESPONDENCE

DR. LUCE WRITES

To the Editor:

We had a comparatively calm trip across the Atlantic. We spent the greater part of the time in reading every article on Health Insurance that has appeared in the Supplement of the *British Medical Journal* for the year 1933. I also read numerous articles, pro and con, especially con. We fully realize the importance of our mission and the amount of work that it entails. We shall cover the work from every angle, from the viewpoint of obtaining facts, indisputable facts, and none other.

We have met a large number of people, and our reception has been most cordial. The American people could do well to copy the courtesy, kindness and consideration of the English towards foreign visitors.

We shall present our findings immediately on our return to the Medical Economics Committee, the Council of the Michigan State Medical Society, and, through these bodies, to the Profession.

Dr. Sinai and I again will be glad to meet the Statue of Liberty face to face in the early part of February.

H. A. LUCE.

London, England, January 15, 1934.

OBJECTS TO INSTITUTIONAL PRACTICE OF MEDICINE

To the Editor:

For the last few years it has been increasingly apparent to those interested in medicine that many of the problems of doctors arise from the fact that the cities and municipalities enter the practice of medicine; especially is this true of institutions such as the Detroit College of Medicine, the Receiving Hospital, the University Hospital, and the University of Michigan.

At the present time in many large hospitals in the city the medical interne, who serves either two or three years, has opportunity to care for only a very few minor injury cases, as most of the accident cases are taken to the above mentioned hospitals. After these men have served three or four years in hospitals, and have received the very finest training, they are reluctant to go out to practice in the cities and towns in Michigan, where there is often a real need for such well-trained men, simply because patients who are well able to pay for services, when advised that they need operation or hospital care, go into hospitals where they can be treated as clinic patients. This does not work out well for the good of the patient, for the practice of medicine, or for the taxpayer. It is true that the taxpayers could be saved millions of dollars if these patients were sent to the private hospitals which at this time are only thirty or forty per cent occupied.

At the present time we have been advised by those who we presume are reliably informed that there is need for a hospital for the care of psychopathic cases and for those suffering from various mental diseases. As a measure for saving the taxpayers millions of dollars, it has been suggested that one-half of the beds in the Detroit Receiving Hospital and the University Hospital be taken over for the care of this type of patient, and let the regular accident and medical and surgical cases be taken care of in their own towns.

I feel that it should be the earnest desire of every professional man in the state to get behind every constructive effort being made by the profession for the betterment of the physicians themselves as well as the citizens of Michigan.

CLARK D. BROOKS.

Detroit, January 5, 1934.

EVERY CALL ANSWERED

To the Editor:

Doctors, as well as other persons, play heroic rôles in difficult times. Doctors may easily be listed among the heroic professions of this depression period, and for this they pay a heavy price. They have learned to make strict economy even more stringent and have permitted deficits to pile up against some future day of reckoning. They have preferred to suffer a financial deficit rather than permit a failure in service. During the most trying years known to this, or any generation, the medical profession has stood its ground; it has withheld nothing. Interminable bank holidays are the order of the day, but who ever heard of a doctor's holiday? Day and night through storm and sleet, rain, or fog, ice, wind, hail, or sunshine, the call for service has been answered, and regardless of pinching economic losses, doctors have borne the load of service unfalteringly. As a result medicine has attained a new high level of respect and good-will, and as we approach a turn in the economic tide, the doctor stands as a new type of hero among the ranks of recovery agencies that are helping men, women, and children to enter what we hope is the promised land of a new and better day.

H.B.K.

OBITUARY

DR. CHARLES BRANCH

Dr. Charles Branch died of cerebral hemorrhage in the Gerber Memorial Hospital at Fremont, Michigan, December 19, 1933, at the age of 57 years.

He was born in 1876, graduated from the Kentucky School of Medicine in 1905, and began the practice of medicine in Muskegon County, Michigan, then went to Adams County, Indiana, for several years after which he returned to White Cloud, Michigan, and assumed his father's practice in 1930, until his death.

He was a member of the Newaygo County Medical Society and Michigan State Medical Society.

January 11, 1934.

SOCIETY ACTIVITY

PUBLICITY

To State Officers, Committee Chairmen, Committee Members

Gentlemen:

The Council, at its meeting, directed the Secretary to call to the attention of all officers and committeemen the following provisions of our Constitution and By-Laws:

Article 4—Section 1: The House of Delegates shall be the legislative body of the Society.

Article 4—Section 4: The House of Delegates shall transact all of the business of the Society.

Article 5—Section 1: The Council shall have the full authority and power of the House of Delegates between annual sessions unless the House of Delegates be called in special session.

BY-LAWS

Chapter 3—Sec. 7-G: The House of Delegates shall approve all memorials and resolutions in the name of the Society before the same become effective. Provided, that in the interim, in the presence of a necessity for prompt action, the Council is empowered to act in behalf of the Society.

Chapter 4—Sec. 4-(2): The Secretary shall conduct all the official correspondence of the Society.

Chapter 4—Sec. 4-(8): The Secretary shall send out all official notices.

Chapter 4—Section 4-(9): The Secretary shall receive and transmit to the House of Delegates or the Council all committee and officers' reports.

Chapter 5—Section 1: The Council is the Executive body of the Society

Chapter 7: When prompt speech and action are imperative, authority to speak and act in the name of the Society is invested in the Council.

The Council desires that these provisions be strictly observed in regard to the publication of interviews, the imparting of information to the press and the public release of reports *before* official action has been recorded by the House of Delegates or the Council in all matters pertaining to organizational activities or organizational problems.

By Direction of the Council.

F. C. WARNSHUIS, *Secretary.*

PREVENTIVE MEDICINE YOUR PARTICIPATION

In the January issue of this JOURNAL your committee stated that it would next discuss the need of preparing physicians for active participation in the community public health service. During the past two decades noteworthy progress has been made in reducing the mortality from such diseases as tuberculosis, diphtheria, typhoid fever, smallpox, and other preventable causes. The public mind has been aroused to the necessity of community effort in the furtherance of such public health services. There is a real public demand that something be done to reduce the prevalence of communicable diseases and to improve the health tone of the growing child. In general, such objectives may be accomplished either through the expansion of official health departments which will employ physicians, dentists, and other technicians on a salary basis, or the same goal may be better reached by bringing into active coöperation the existing professional resources of the local community, both in the field of medicine and dentistry. The fulfillment of this last mentioned program will require the hearty coöperation of the local health service which acts as a stimulating agency in forcibly bringing to the attention of the public the need of such preventive services. Public health is but a summation of personal health, and the success of any effort to eliminate needless illness from preventive causes depends upon the success with which we can stimulate a personal interest on the part of each individual citizen, more especially the interest of the parent in the care of his or her child.

However, before the health educational program is vigorously pursued by the local health and education authorities, it becomes necessary to prepare the profession, first, with respect to the group plan, which should be under the control and supervision of the local medical society, and secondly, with regard to the technical procedures to be followed. The physician in private practice should be willing to subordinate his personal views to those of the plan sponsored by the organized profession. Failure to do so would result in misinterpretation on the part of the public.

If children are to be protected against diphtheria every coöperating physician must be acquainted with the technic of immuniza-

tion and must be conversant with the accepted practices, he must know whether toxin-antitoxin or toxoid is to be used, he must have a knowledge of the reactions which may be expected in children at various ages, he must know the length of time for which protection is usually given, and must be prepared with answers for the numerous inquiries which will occur to the public mind.

A plan for the discovery of the early case of tuberculosis necessitates a complete understanding of the tuberculin test and its relative importance in relation to the x-ray examination of the chest and the general physical examination of the patient. Such a group plan involves a standardization in medical practice, such standards to be arrived at through group consultation and preferably controlled through the public health committee of the local medical society. In this manner the chances of misunderstandings arising on the part of the laity are minimized, especially in broadcasting the public health needs of the community.

Under the rural studies which have been sponsored by the W. K. Kellogg Foundation and the urban work as carried on by the Wayne County Medical Society, post-graduate conferences in the diagnosis, treatment and prevention of communicable diseases have been used with significant results. In cities where clinical facilities are available, it is relatively easy to organize such post-graduate courses. Conferences of this character have been held in Detroit at the Herman Kiefer Hospital during the past five years, and have been enthusiastically supported by the local medical profession. The attendance at the individual meetings has been anywhere from one hundred to three hundred physicians and these conferences have generally been held each week during the winter months.

In the Barry, Eaton, and Allegan counties, through the coöperation of the W. K. Kellogg Foundation, an opportunity has been afforded to send the local physicians to some large medical center for intensive post-graduate study where particular emphasis has been placed upon physical diagnosis, instruction in the handling of diseases of childhood and in preventive medical services. Of the 72 physicians practicing in these three counties, 56 have already benefited from such post-graduate instruction courses.

While we realize that all counties will not be blessed with such financial support as to make available this type of instruction, at large medical centers, this Committee has arranged for the gradual extension of such post-graduate courses into the various counties of this state to be sponsored by the county or district medical society. Those who are interested may make application to the Secretary of the State Medical Society and arrangements will be completed so that desirable instructors can be provided for this purpose.

The Committee also feels that it is essential that the great majority of the local physicians should coöperate and manifest their interest by attending such medical conferences. Each local medical society has been requested to appoint a local public health committee whose function should be to inform all local doctors of the objective of such a program. If this is not done, it is difficult for the layman to differentiate between the physician who has prepared himself in accordance with a general group plan and the physician who is uninformed. In a large city as Detroit, it has been next to impossible to reach all physicians through such post-graduate conferences and consequently the county medical society with the coöperation of the local health department has employed a medical coördinator whose function is to reach the physician who is not wont to attend medical meetings.

This medical coördinator, in contacting the physician in his own office, has explained the nature of the program, has indicated that the latter has a definite function which he can perform in the furtherance of the community health work and that by his participation he minimizes the need of making available services through public clinics. Therefore, it is seen that the first step in the suggested program of medical participation is a stimulation of the interest of every practicing physician so that he becomes aroused to the desirabilities of his taking an active part by providing health service through his own personal practice in his own office. In this manner, each physician develops a definite personal knowledge of the entire plan, becomes familiar with the community health needs, and is ready to accept his responsibility.

With the adoption of such a group plan, the problem of carrying the story to the public becomes relatively simple. We have on one hand a prepared and qualified physician ready to serve the child by giving diphtheria immunization, smallpox vaccination, and periodic health examinations in his own office and we have on the other hand a parent serving as custodian of a growing child who is in need of a definite preventive service. The problem is to bring about a contact between their child and the parent and the physician. This necessitates a well defined program of health education which can be best handled through the agency of a full time local health service which has a sympathetic attitude towards its relationship with the medical profession.

Experiences in certain cities such as Detroit, St. Louis, Missouri, and Charleston, West Virginia, and in certain rural counties such as the three Michigan counties above referred to indicates that such a program may be carried on with advantage not only to the medical profession, but to the individual citizen and to the local public health organization. The means employed in carrying on this educational program will be discussed in the next communication sponsored by this Committee.

COMMITTEE ON PREVENTIVE MEDICINE,
MICHIGAN STATE MEDICAL SOCIETY.

YOU WANT TO KNOW

The federal relief program has brought about numerous regulations and procedures that affect practically every sphere of human activity. Its influence upon medical practice and care is of intense interest to every member. In previous issues we have imparted developments of the month. Important promulgations have been transmitted to County Societies in special bulletins. The American Medical Association through the *Journal of the A. M. A.* has been active in imparting information secured by the Association's representatives in Washington. All inquiries have been answered by personal letters or telegrams from the Secretary's office.

The A. M. A. and your State Society has been on the job constantly. Your state officers have maintained contact with our state commission and will continue to do so. The latest advices and information have been transmitted in a Bulletin dated Jan. 10th to every county society. We have sought to keep you posted on what you wanted to know.

In the middle of December a disturbing rumor came in relation to a proposed plan of federal sickness insurance. What the eventuality would be we were uninformed. It was felt that we should be prepared. The Executive Committee was called to meet in Chicago in special session on Dec. 28th for conference with the executives of the A. M. A. The minutes of that meeting are published in this issue.

Dr. H. A. Luce and Dr. N. Sinai are now in England, where they were sent on a mission to secure evidence as to whether the application of the principles of health insurance had failed. They were sent on this mission by the State Society.

The minutes of the mid-winter session of the Council are published in this issue.

These statements and references are all that we can impart in answer to your "want to knows." It is felt that service has been rendered to every member.

PRACTICE RIGHTS OF CULTISTS

CHIROPRACTORS are not authorized to dispense or prescribe drugs and medicines;

OSTEOPATHIC physicians are authorized to dispense and prescribe drugs and medicines to relieve pain and suffering, but not for the purpose of the cure or relief of illness or disease;

EMERGENCY Welfare Relief funds may be used for services of chiropractors and osteopathic physicians only when such services are performed in compliance with the statute under which the practitioner is licensed.

January 5, 1934.

Mr. William Haber
Assistant State Relief Administrator
609 City National Building
Lansing, Michigan.

Dear Sir:

I have your letter of December 30 in which you ask certain information concerning the right of the Emergency Welfare Relief Commission to pay for the dispensing of drugs and the performing of surgical operations by osteopathic physicians and chiropractors.

The commission has no right to spend

any of its money for illegal purposes. It is, therefore, necessary for you to determine the right of a chiropractor or an osteopath physician to perform surgical operations or to prescribe and dispense drugs and medicines.

The rights of a chiropractor are defined by Sec. 6, Act No. 145, Public Acts of 1933. This section defines "Chiropractic" as "The locating of misaligned or displaced vertebræ of the human spine, the procedure preparatory to and the adjustment by hand of such misaligned or displaced vertebræ and surrounding bones or tissues."

It will be noted from the foregoing that a chiropractor is limited to an adjustment by hand of misaligned or displaced vertebræ and the surrounding bones or tissues. This does not permit the prescribing or dispensing of drugs or medicines or of the performance of surgical operations by a chiropractor. However, there can be no objection to the use of emergency welfare relief funds for the payment for services rendered by chiropractors so long as he keeps within the limits of his authority under Act No. 145, Public Acts of 1933.

See Locke v. Ionia Circuit Judge, 184 Mich. 535.

The practice of osteopathy is regulated by Act No. 162, Public Acts of 1903, being Sections 6757 to 6764, Compiled Laws of 1929. Sec. 4 of this act, being Section 8760, Compiled Laws of 1929, confers upon osteopaths the right to "practice Osteopathy in the state of Michigan in all of its branches as taught and practiced by the recognized schools or colleges in osteopathy, but which shall not authorize him to practice medicine within the meaning of Act No. 237, Public Acts of 1889, or acts amendatory thereto."

"Osteopathy" is defined by the Standard Dicitionary as—

"A system of treating diseases without drugs. It is based on the belief that disease is caused by some part of the human mechanism being out of proper adjustment. as in the case of misplaced bone, cartilage, or ligament, adhesions or contractions, etc., resulting in unnatural pressure on or obstruction to nerve, blood or lymph."

Quoting State v. Sawyer, 36 Idaho, 814, 214 Pac. 222; State v. Bonham, 93 Wash. 489, 161 Pac. 377.

Webster's dictionary defines "osteopathy" as—

"A system of treatment based on the theory that diseases are chiefly due to deranged mechanism of the bones, nerves, blood vessels, and other tissues, and can be remedied by manipulations of these parts."

Quoting in re Rust, 181 Cal. 73, 183 Pac. 548; Waldo v. Poe, 14 Fed. (2d) 749; State v. Johnson, 84 Kan. 411, 114 Pac. 390; Arnold v. Schmidt, 155 Wis. 55, 143 N. W. 1055.

Century Dictionary defines "osteopathy" as—

"A theory of disease and a method of cure***resting on the supposition that most diseases are traceable to deformation of some part of the skeleton (often due to accident) which by mechanical pressure on the adjacent nerves and vessels interferes with their action and the circulation of the blood.

"The practice (of osteopathy) consists principally in rubbing, pulling and kneading with the hands and fingers certain portions of the body and flexing and manipulating the limbs of those afflicted with disease, the object of such treatment being to remove the cause or causes of the trouble."

Little v. State, 60 Neb. 749, 51 L.R.A. 717; Bandel v. New York, 124 N.Y.S. 869.

"The practice of osteopathy is confined to the manipulation of the human body by applying the hands only to the body of the patient."

Medical Examiners v. Baudensdistel, 140 Atl. 886.

Thus the difference between the practice of medicine and surgery and the practice of osteopathy is clearly drawn. The one is the cure of disease by the use of drugs, medicines or any therapeutic agent, the other is the cure of disease by means of manipulation with the hands of bones, nerves, blood vessels, and tissues.

This distinction is recognized by the legislature in the proviso contained in Sec. 4, Act No. 162, Public Acts of 1903 (Section 6760, Compiled Laws of 1929):

"Provided, that nothing in this act shall be construed to prohibit any legalized osteopathic physician in this state from practicing medicine and surgery after having passed a satisfactory examination before the state board of medical examiners in the state of Michigan."

On May 10, 1913, Grant Fellows, Attorney General, rendered an opinion to the effect that one licensed to practice osteopathy under the act of the legislature, Session of 1913, may not practice medicine and surgery. In that opinion he used the following language:

"The right that is conferred is solely that of practicing osteopathy as it is taught in various recognized schools and colleges. It will be noted that the privilege is not given to practice any other branch of medicine or surgery in which such schools or colleges may undertake to instruct its students. In other words, the fact that these institutions referred to in the act embrace in their course of study certain branches not included in what is commonly understood and denominated the practice of osteopathy does not confer upon the graduates thereof the right to practice anything except osteopathy under the act in question."

Since that opinion was written, the right of osteopaths to dispense narcotic drugs under the Harrison Narcotic Act has been twice before the United States District Court for the Eastern District of Michigan.

Bruer v. Woodworth, 22 Fed. (2d) 577; Hostetler v. Woodworth, 28 Fed. (2d) 1003.

In the Bruer case, Justice Dawkins presiding, said:

"It is proved by the applicant, and no contradictory evidence offered by the respondent, that all recognized schools of osteopathy teach anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, diagnosis, obstetrics, gynecology, surgery, hygiene, etc., and that they have well-organized hospitals and clinics where nearly all of human ills are diagnosed and treated, although they give no internal medicine; that it is a part of their regular practice to handle obstetrical cases and others involving intense pain and suffering, where it is essential to afford temporary relief by the use af anæsthetics. Besides, the provisions of the law above quoted affecting osteopathy in several places refer to them as 'osteopathic physicians.' It is true that section 6732 of the Compiled Laws of the State of Michigan of 1915 (Medical Practice Act) defines the practice of medicine in the state as follows:

" 'The term "practice of medicine" shall mean the actual diagnosing, during or relieving in any degree, or professing or attempting to diagnose, treat, cure, or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever.'

"Yet, if this section were literally construed in its application to osteopaths, it would prevent them from 'diagnosing, during or relieving,***or professing or attempting to diagnose, treat, cure or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by advice, or * * * appliance, manipulation or method.' This would make it impossible for them to pursue their profession."

In the Hostetler case, Judge Tuttle referred to and adopted the opinion of Judge Dawkins in the Bruer case.

In the case of Mutual Life Insurance Co. of New York vs. Geleynse, 241 Mich. 659, the court held that an osteopathic practitioner is a physician. „

Under the terms of the act regulating the practice of osteopathy, Act No. 162, Public Acts of 1903, an applicant for registration is obliged to pass "an examination as to his qualifications for the practice of osteopathy, which shall include the subjects of anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, diagnosis, obstetrics, gynecology, surgery, hygiene, public health laws of Michigan, medical jurisprudence, principles and practices of osteopathy and such other subjects as the board may require."

Former Attorney General Fellows, in his opinion of May 10, 1913, calls attention to the fact that the statute does not authorize osteopaths to practice medicine or surgery except in compliance with the above quoted proviso, even though the same or some branches may be taught in osteopathic schools and colleges. But osteopathic physicians are authorized only to "practice osteopathy in all of its branches."

It is recognized by the courts (see the Bruer and Hostetler cases) that the use of drugs and narcotics has some part in the practice of osteopathy, especially in the relief of pain and suffering and temporary relief by means of anæsthetics, though osteopathic physicians do not attempt to cure disease by the use of internal medicine. They are not permitted to perform surgical operations nor to dispense drugs and medicines except for the purpose of relieving pain and suffering and temporary relief by means of anæsthetics, in connection with their practice of osteopathy.

It is my opinion that osteopathic physicians may prescribe and dispense drugs and medicines, including narcotics and anæsthetics, for the relief of pain and suffering in connection with the practice of osteopathy and that when so used, Emergency Welfare Relief funds may be used for the payment thereof; but that osteopaths have no right to perform surgical operations or to prescribe or dispense drugs and medicines for the relief or cure of any illness or disease, and Emergency Welfare Relief funds should not be used for the payment of such services.

Very truly yours,

P. H. O'BRIEN, *Attorney General.*

MINUTES OF THE SPECIAL MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY

1. In response to the special call of the Chairman, the Executive Committee of the Council of the Michigan State Medical Society met in Chicago at the headquarters of the American Medical Association at 10:00 A. M. on Thursday, December 28, 1933. There were present:

B. R. Corbus, Chairman, Henry Cook, F. A. Baker, C. E. Boys, H. A. Luce, Henry R. Carstens, Geo. L. LeFevre, President, R. R. Smith, Pres.-Elect, J. D. Bruce, University of Michigan, W. H. Marshall, Nathan Sinai of the Committee on Economics, F. C. Warnshuis, Secretary.

2. Chairman Corbus made an opening statement that the special meeting had been called because of an urgent request from the Committee on Medical Economics that an appropriation be made in order that Dr. Nathan Sinai and Dr. H. A. Luce might sail during the early part of January for London, England, for the purpose of securing authentic information relative to the endurance or the failure of the principle of Health Insurance as operating in England. The Committee on Economics had reached the point in its deliberations and work, under the instructions of our House of Delegates, where it was imperative that these facts be established in order that the Committee might be guided in the further conduct of its investigations, studies and recommendations.

The Chairman further stated that before authorizing such a mission to England it would be advisable to definitely ascertain by conference with the officials of the American Medical Association headquarters whether this information was not obtainable at our Chicago headquarters or elsewhere in this country.

The Chairman further stated that the Secretary had attended a special meeting of the Executive Committee of the American Medical Association that was held in Chicago on December 27 and that he had arranged for an interview and that interview had been held, at which there were present—Dr. J. H. Upham, Chairman of the American Medical Association's trustees, Dr. Olin West, Dr. C. B. Wright of Minneapolis, A. M. A. Trustee, Dr. Crockett of Lafayette, Indiana, Member of the A. M. A. Legislative Committee, Dr. Cary, Chairman of the A. M. A. Legislative Committee and Past President of the A. M. A., Dr. Leland of the Bureau of Economics of the A. M. A., Dr. W. A. Woodward of the Bureau of Legal Medicine and Legislation of the A. M. A., Dr. B. R. Corbus, Dr. J. D. Bruce and Dr. F. C. Warnshuis. That a frank discussion was held relative to the problem presented by the Committee on Economics and also relative to the medical features of Federal Emergency Relief and other government Commissions and Agncies.

The Chairman also stated that the Secretary had arranged that at this meeting of the Executive Committee there would be available the headquarters' personnel for consultation.

3. At this time Drs. Olin West, Woodward, Leland and Cary entered the meeting and participated in the deliberations.

4. Dr. W. H. Marshall, Chairman of the Committee on Economics, and Dr. Nathan Sinai, Director of the Studies of the Committee on Economics, were called upon and made a statement as to the actions and requests and views of Michigan's Committee of Economics.

5. Following the foregoing statements there was a general discussion, participated in by Drs. West, Woodward, Leland, Cary, Marshall, Bruce, Baker, Luce, Carstens, President LeFevre and President-Elect Smith. During this discussion many questions and many subjects were brought forth and statements were presented regarding the activities that were being pursued and pressed by the A. M. A. in compliance with instructions from the Board of Trustees and the House of Delegates of the A. M. A.

At 1:00 P. M. the Committee recessed for luncheon in the headquarters building.

6. The Executive Committee reconvened at 1:45 in executive session. There was a frank and full discussion and review of the subjects and replies that had been secured during the morning session.

It was the opinion that the A. M. A. would not resent the proposed action on the part of the Michigan State Medical Society. It was further generally accepted that at the present time dependable evidence was not available to refute a statement that

the principles of medical insurance were failing in Europe and in England.

It was further stated that the expenses of the mission to England would be in the neighborhood of $1,400 and that $350 of this amount would be paid by the American College of Dentistry, the balance to be paid from the $7,500 fund that was to be received for the work of the Committee on Economics and that the expenses of the mission would not be charged to the operating fund of the State Medical Society.

It was further agreed that it would be highly desirable that Dr. Sinai be accompanied by a representative member who is in active bedside practice and who was not connected with any institution, hospital or public health organization.

7. It was moved by Dr. Baker and supported by Dr. Cook that the Executive Committee approve the request of the Committee on Economics and that Dr. H. A. Luce and Dr. Nathan Sinai be authorized to go to England for the purpose of securing the facts that were deemed desirable and as had been outlined in the conference and discussions.

8. It was moved by Cook-Carstens that the Council of the Michigan State Medical Society be requested at its meeting January 15 to determine an honorarium for Dr. H. A. Luce that would in part compensate him for time lost from his practice during his absence.

9. It was moved by Cook-Boys that the Chairman of the Council, President LeFevre and President-Elect Smith, confer with Dr. Olin West immediately upon adjournment and advise him as to the action that had been taken by the Executive Committee and the spirit that governed this action and the sending of our mission to England.

10. The Executive Committee adjourned at 3:15 P. M.

F. C. WARNSHUIS, *Secretary.*

MEDICAL RELIEF UNDER FERA IN KENT COUNTY

By PAUL W. KNISKERN, M.D., Medical Director

Prior to the operation of the Federal Emergency Relief Administration in Grand Rapids, city indigent patients were given medical care in a central clinic and at home by a small group of physicians on salary. This organization was equipped to operate at a very low cost per patient. Then came federal and state regulations with provisions for re-establishing family-physician relationships and payment of individual fees for services. The entire medical relief outside the hospitals was of necessity assumed by the Relief Commission, and the question arose as to whether the precepts set forth in Federal Bulletin No. 7 of the Emergency Relief Administration must be set up in their entirety or whether "existing clinics should continue." A ruling was obtained from the State Relief Administration to the effect that the work might continue as in the past, but that the local commission was empowered to adopt any course which would not greatly increase the cost.

So a compromise arrangement has been adopted, and during its rather brief existence has been found satisfactory enough to warrant its publication in the hope that some of the ideas embodied may be helpful elsewhere during this difficult transition period.

Within the city limits of Grand Rapids all patients needing care that can be rendered in a clinic are required to come to the central clinic. At present the work is divided up as follows: a general medical clinic operated by a rotating group of practitioners; surgical, gynecological, pre- and post-natal, eye, ear, nose and throat, diabetic, rectal, and dental clinics operated by specialists on salary. The City Health Department operates a venereal and a tuberculosis clinic. A pharmacy is maintained, using standard drugs purchased in large amounts at minimum cost. The director's office is always open for authorization of medical care, using a file kept up-to-date with the welfare office.

House calls are given out to the physician of the patient's choice, the family placing the call at the central office, where it is checked against the file and relayed to the doctor. Confinement cases are handled in the same manner. We are paying the maximum fee allowed by the State Administration—$1.50 for day calls, $2.50 for night calls, and $15 for confinements in homes. It is our impression that patients are being better cared for than under the former system, and they are unquestionably much happier about it. People are anxious to have their own physician for acute illnesses, serious chronic illnesses, and confinements, but usually content to have minor ailments treated in the clinic. Clinic visits outnumber house calls two or three to one, and if private office calls were allowed, the disproportion would undoubtedly be much greater, so a large saving is effected by continuing the clinic.

Outside the city, patients are allowed free choice of physicians in their vicinity for office work as well as house calls. Authorization for such services is either through the director's office or directly from the social visitor. This also applies to dental work. Patients may be sent to the clinic for special examinations.

The reporting of home visits is done by means of small blanks with space for a brief medical report, which also serve as charge slips. These are all copied into the patient's chart in the director's office.

Our laboratory work is done at the local branch of the Michigan State Laboratory. X-ray work is sent to private or hospital laboratories. When cases require hospital care they are referred to the city or county physicians until their discharge.

Nursing service is furnished in the city by the Bureau of Public Health Nursing, a part of the Health Department, without cost to the Relief Commission. In the metropolitan area surrounding Grand Rapids, an arrangement has been made with the Community Health Service, which is in part supported by community chest funds, to give care on a fee basis as established by the state regulations.

The number of home calls has not increased appreciably over that of a year ago, when people did not have their choice of physicians. The total increase of cost of medical relief brought about by this change in policy will probably amount to little more than 20 per cent. It is with considerable satisfaction that the writer is able to report that any attempts of physicians in this county to make unnecessary calls is negligible, that on the contrary many men are rendering more service than they are charging for, and evincing an interest in their patients' welfare far out of proportion to the pecuniary returns involved.

THIRD HONOR

Goes to Shiawassee County Medical Society for 100% payment 1934 Dues.

Minutes of the Mid-Winter Meeting of the Council of the Michigan State Medical Society

1. The Council of the Michigan State Medical Society convened in Mid-Winter session at the Statler Hotel in Detroit on January 15, 1934, at 1:00 P. M. with the Chairman, Burton R. Corbus, presiding.

There were present—Cook, Powers, Perry, Urmston, Boys, Corbus, Treynor, Carstens, Manthei, Van Leuven, Heavenrich, Baker, Brunk, McIntyre, Cummings and Hafford—16.

Absent—H. H. MacMullen—1.

There were also present, President Geo. L. LeFevre, President-Elect R. R. Smith, Editor J. H. Dempster, Treasurer Wm. A. Hyland, W. J. Stapleton, Jr., J. B. Bradley and the Secretary.

2. The minutes of the meeting of the Executive Committee since the Annual Meeting in September, 1933, were presented. Upon motion of Powers-Boys these minutes were adopted and made a part of the records of the Council.

3. Upon motion of Councilor Brunk, supported by Councilor Urmston, Doctor F. A. Baker was elected Chairman of the Publication Committee. The Chairman named as the other members of the Publication Committee, Councilors Brunk and McIntyre.

4. The Secretary presented the following as his annual report:

SECRETARY'S ANNUAL REPORT

1933

To the Council,
Gentlemen:

I have the appreciated honor to present to the Council and through your body to the membership my annual report as Secretary for the year 1933.

FINANCES

Your Auditor's financial report, together with itemization of income and expenditures are submitted herewith. Comment:

When consideration is given to the fact that $5,543.66 was expended on the Survey Committee's program and $2,538.80 on legislative work—an excess of $4,332.46 over our original budget appropriations for these two activities—then our net operating loss of $2,080.43 for the year is a satisfactory showing.

Our Journal subscriptions, advertising sales and reprint sales produced $11,582.61. That was $1,000 less than the estimated advertising income and about $200 less subscription income. The total Journal expenses were $10,217.55, giving a Journal profit of $1,365.06. Against this figure should be charged a percentage of postage, stenographic expense and secretary's service which would reveal the Journal as having closed the year with income and expense balanced.

Itemization of all expenditures is appended to this report.

BUDGET FOR 1934

The following Budget is submitted for 1934:

INCOME

3,200 Members @ $8.75	$28,000.00	
Interest	1,200.00	
		$29,200.00

APPROPRIATIONS

Defense Fund @ $1.50	$ 4,800.00	
Journal Subscription @ $1.50	4,800.00	
Rent, Phone and Light	1,400.00	
Annual Meeting	750.00	
Post Graduate Conferences	750.00	
Committee Expenses	500.00	
Legislative Committee	3,000.00	
Council Expense	1,200.00	
Postage	450.00	
Delegates to A. M. A.	500.00	
Stenographic	2,500.00	
Society Expense	1,500.00	
Secretary's Salary		
Contingent Fund	6,050.00	
		$28,200.00

JOURNAL BUDGET

Income

Advertising	$ 6,000.00	
Subscriptions	4,800.00	
		$10,800.00

Expenses

Printing	$ 7,000.00	
Editor's Expenses	600.00	
Postage	50.00	
Editor's Salary		
Reserve	3,150.00	
		$10,800.00

MEMBERSHIP TABULATION

County	1932	1933	Loss	Gain	Unpaid	Deaths
Alpena	14	16	....	2	....	....
Antrim-Charlevoix-Emmet-Cheboygan	30	34	....	4	2	....
Barry	13	14	....	1	....	....
Bay-Arenac-Iosco	62	61	1	....	4	1
Berrien	41	42	....	1	3	....
Branch	13	11	2	....	3	....
Calhoun	110	109	1	....	10	....
Cass	12	12	....	....	....	2
Chippewa-Mackinac	17	17	....	....	....	....
Clinton	12	11	1	....	2	....
Delta	23	20	3	....	3	....
Dickinson-Iron	19	18	1	....	1	....
Eaton	23	26	....	3	....	....
Genesee	133	137	....	4	13	....
Gogebic	26	24	2	....	3	....
Grand Traverse-Leelanau	28	27	1	....	3	....
Gratiot-Isabella-Clare	28	32	....	4	....	1
Hillsdale	20	20	....	....	1	....
Houghton-Baraga-Keweenaw	39	38	1	....	3	....
Huron	9	9	....	....	1	....
Ingham	87	98	....	11	1	1
Ionia-Montcalm	34	33	1	....	1	....
Jackson	71	65	6	....	9	....
Kalamazoo	120	132	....	12	2	2
Kent	229	209	20	....	29	....
Lapeer	16	17	....	1	....	....
Lenawee	34	30	4	....	5	....
Livingston	11	19	....	8	1	....
Luce	10	9	1	....	1	....
Macomb	33	34	....	1	4	....

Manistee	15	15	....	....	....	....
Marquette-Alger	35	35	....	....	2	....
Mason	8	9	....	1	1	....
Mecosta	20	19	1	....	1	....
Menominee	10	11	....	1	....	....
Midland	8	9	....	1	....	....
Monroe	33	32	1	....	4	....
Muskegon	64	67	....	3	....	2
Newaygo	10	11	....	1	1	....
Oceana	9	11	....	2	....	....
Oakland	95	101	....	6	6	....
Otsego-Montmorency-Crawford-Oscoda-Roscommon-Ogemaw	13	15	....	2	1	....
Ontonagon	5	6	....	1	....	....
Ottawa	30	32	....	2	1	....
Saginaw	75	78	....	3	5	....
Sanilac	11	10	1	....	2	....
Schoolcraft	5	5	....	....	....	....
Shiawassee	27	25	2	....	2	1
St. Clair	41	38	3	....	3	....
St. Joseph	17	18	....	1	2	....
Tuscola	22	29	....	7	2	....
Washtenaw	124	135	....	11	17	....
Wexford-Kalkaska-Missaukee-Osceola	21	20	1	....	2	....
Wayne	1264	1105	159	....	293	6
	3279	3160	213	94	450	16
	3160		94			
TOTAL LOSS—1933	119		119			

The foregoing tabulation is a most inspiring exhibit. Our members have been sorely pressed by reason of financial reverses, impounding of their bank deposits and lessened income. They have in many instances made personal sacrifices to retain affiliation. This evidenced support has been materially accomplished by reason of the activities of the officers of county societies to whom unstinted credit is cheerfully given.

This recorded membership loyalty has been a constant inspiration to your Secretary. Diligent effort has been made to record appreciation by intensified increasing activity to secure for each member the greatest amount of membership benefits and to enhance a member's personal welfare and interest.

It must not be forgotten that medical organization has been and will continue to be the most powerful influence in the protection and maintenance of the personal interests of the individual physician. We must deal collectively with the exploitation of medicine and demand the economic security of the individual physician.

DEATHS

E. A. Hoyt	Bay City
Geo. W. Green	Dowagiac
Alex B. MacNab	Cassopolis
Rayburn B. Smith	Alma
John G. Rulison	Lansing
A. J. Foelsch	Gobles
H. A. Nex	Allegan
Robt. I. Busard	Muskegon
Anson A. Smith	Muskegon
J. S. Shoemaker	New Lathrop
J. Hamilton Charters	Detroit
Ray Connor	Detroit
E. M. Currie	Detroit
L. W. Haynes	Detroit
Samuel Kahn	Detroit
Homer E. Safford	Detroit

The foregoing members passed on to the "great adventure." We record their names in our archives. We pause to honor them, fully realizing that they erected their own monument by their deeds and service to mankind.

ANNUAL MEETING

By reason of the interest manifested, our plan of morning section meetings and afternoon general scientific meetings warrants continuation.

Concern is expressed, however, for the General Session held on the first evening, at which the president and an invited guest deliver addresses. For several years the attendance at this general session has been extremely small. At a recent one there were less than 200 present and the majority were lay people.

The following suggestion is presented for consideration:

That on the first day the Scientific Sections convene at 9:00 A. M. and adjourn at 10:45 A. M. The members then to convene in General Session, at which time the President will deliver his annual address. The Sections to reconvene at 1:30 P. M. These to be followed by an evening clinical demonstration session with case presentation. Such a program would appeal to a large number of members and be of material benefit. I append the recommendation of Section Officers.

POST GRADUATE CONFERENCES

In cordial coöperation with the Department of Post Graduate Medicine of our University, unexcelled opportunities for post graduate study exist and are being extended for our members. Our Society is deeply indebted to Doctor J. D. Bruce for his sustained, intensified activities in establishing and developing these study opportunities at the University and in Detroit. We can already declare that there is now in operation a school of graduate medicine providing courses comparable to any and in many instances excelling those of other clinical teaching centers. With the objectives formulated, it will be but a comparatively short time before the University's Post Graduate Department of Medicine will be the outstanding one in the nation. A greater realization of the value of this asset, so valuable to our membership, should be stressed to all medical men. Our Society is fortunate in being able to be a coöperating factor in this educational activity.

We recognize that adequate medical care can come only from adequately prepared and trained medical men. We further recognize that medical men can remain adequately prepared only by sustained post graduate work and that every doctor should be encouraged to embrace these opportunities by devoting a certain amount of time each year in attendance upon the courses that are arranged for him. It is an obligation of our Society to aid in providing graduate instruction and to urge our members to avail themselves of these facilities that are in operation at their very doorstep. To that end your Secretary requests that he be authorized to cooperate with the Director of Post Graduate Medicine of the University in presenting these facts to our members and in urging attendance as well as in arranging courses in Ann Arbor and Detroit and in the furtherance of Regional Post Graduate Conferences.

COUNTY SECRETARIES CONFERENCE

The recommendation is made that your Secretary be authorized to arrange for the annual Conference of County Secretaries at a time during the early spring months, to be approved by the Executive Committee. That actual travel expenses, and, when necessary, hotel expenses be authorized.

These conferences are of distinct value and material aid in maintaining county society activities.

SURVEY COMMITTEE

The work of this Committee has been imparted through its report and through the action of our House of Delegates. As a matter of record the following itemization of expenditures of society funds is imparted.

1931	$ 108.90
1932	4,484.88
1933	5,623.08
Total	$10,216.86

ECONOMICS COMMITTEE

The House of Delegates has created a Committee on Economics to continue the studies of the Survey Committee and to apply its recommendations if funds could be secured to defray expenses. The Economics Committee is now composed of seven members.

Following an expenditure of $10,216.86 of society reserve funds in defraying the expenses of the Survey Committee, the Society was in no financial position to finance the expenses of the work of the Committee on Economics. The House of Delegates directed that no further funds of the Society be expended. It was, therefore, necessary to seek funds in the form of contributions from acceptable sources.

Your Secretary has the honor to report the receipt of a check of $3,500 on January 6, 1934, together with a promise of $1,000 per month for four months, from Mr. Tracey W. McGregor of Detroit for the purpose of defraying the expenses of the Society's Economic studies.

Absolute and sole credit for the presentation of our needs and the securance of this contribution belongs to Doctor J. D. Bruce.

As Councilor, Chairman of the Publication Committee, Member of the Executive Committee and Director of Post Graduate Work, Doctor Bruce served our Society for a period of ten years. He gave much of self and time in furthering our Society's activities and developing sound policies. In October, 1933, he presented his resignation because of the demand of the University for an increased amount of his time. Doctor Bruce, however, promised a continuation of service and interest in our activity and problems. He now verifies that promise in the securance of this contribution and merits a warm expression of thanks and appreciation.

The Council will certainly voice, in suitable form and by appropriate action, the Society's expressions of appreciation and thanks to the donor, Mr. McGregor, and to Doctor J. D. Bruce for having made possible the continuation of the work of our Committee on Economics.

COMMITTEES

Our Society is indebted to the members constituting our Committees. These members are unselfish in their contribution of time and self in furthering activities.

Outstanding is the work being done by the Committee on Preventive Medicine. Its program merits the active and aggressive support of every county unit. The accomplishment of the Committee's objectives will record one of the greatest achievements of our Society. It will materially enhance every member's interest.

The Committee on Drugs and Therapy is performing a commendable service.

Our legislative interests are in the hands of a reliable Committee in whom every confidence can be placed.

There is every indication that our activities delegated to Committees will be outstanding.

The State Secretary's office and all its facilities are made available to every Committee and intensive coöperation is constantly subscribed.

WOMAN'S AUXILIARY

It is a pleasure to report that the present officers of the Woman's Auxiliary are sponsoring a renewed program of helpful assistance.

SUPPLEMENTAL REPORTS

There are appended to this report supplemental reports upon the special subjects of Group Insurance and Legislation which your Secretary was directed to investigate.

EMERGENCY WELFARE MEDICAL RELIEF

The activities of this office in the problems presented by the Emergency Welfare Relief Commission have been reported in the December and January Journals. Your Secretary was the recipient of over two hundred inquiries from County Societies and County Committees. A very material increase of work was created by these problems.

Current events, governmental plans and administrative policies directed toward overcoming the depression and unemployment are beginning to involve medical care and medical practice in a serious manner. Bulletin No. 7 creating regulations for medical care for Welfare Relief was soon followed by the CWA plan. Individuals placed upon CWA rolls were removed from relief rolls and no provision was made for their medical needs. CWA workers were shortly declared as entitled to Compensation Relief in case of accident or injury. The declaration of this policy was shortly followed by a proposal to enlist a corps of doctors to render compensation services at given fees.

Then came the information that these alphabetical plans were to be developed upon a five or possibly ten year basis. But a few days elapsed when a "tip" came through that a plan for Governmental Health Insurance was in the making and would eventually be promulgated.

We are uninformed as to the identity of the individual or group of individuals who are initiating these movements for the socialization of medicine and medical care. Whoever they are, they are apparently embracing this period of unrest and confusion for the purpose of inaugurating these social movements. If they succeed, under the plea of an existing emergency, when the emergency is past they will have instituted Bureaus, officials and programs that will be difficult to discontinue. They will become permanent agencies under governmental, political and lay control.

Breaks are coming fast. A new plan is quickly followed by another with more startling and radical provisions. No opportunity, no hearings are accorded for protest or discussion. Representatives of medicine are not consulted. A plan is proposed, regulations are drawn up, someone attaches a signature of approval and it is in effect as a government measure. It is sent to State and County Commissions and put in force.

The American Medical Association has had personal representatives in Washington for many weeks for the purpose of imparting guiding advice to federal officials and to aid in preventing the promulgation of adverse and unwarranted regulations that involve the health and medical care of the people. Apparently little heed is being given to the facts presented.

Your State officers are in close contact with State Commissions and Administrators, with discouraging results. The reply is always that instructions come from Washington and that they have no alternative than to follow and obey them.

These conditions have drawn heavily upon this office and have consumed time and effort to a large degree. The quest has ever been to make represen-

tation in behalf of our members' interests and to join with sister states and the American Medical Association in presenting facts and imparting advice. At this writing there is no fixed federal policy. Changes are announced daily which present new problems. We shall seek to keep our members informed through the JOURNAL and Bulletins to County Officers.

Members should remember that to advise, to ask or to recommend is not followed by federal officials' approval. We seek to exercise wholesome guiding influence but that does not imply that our representations will be complied with or adopted. We are in a changing state of events, the end results of which no one is able to forecast. Organization is, however, not unmindful of its obligations. It is seeking to conserve the profession and the public's health interests and it is accomplishing results far more satisfactory than would have resulted had organizational prestige and influence been dormant. Individual effort would have been wholly unavailing.

OFFICE ADMINISTRATION

For record purposes your Secretary cites the increasing volume of correspondence. An average of twelve letters a day are received from members and lay persons seeking information and advice. This is indeed inspiring. We welcome these inquiries for they enable us to establish the Society as a reliable source for information. We desire to increase this recognition on the part of the public as well as by our members.

Your Secretary has diligently endeavored to cause his office to be of the greatest possible assistance to our members, and each county unit. To special and permanent committees there has been given every possible aid. Our records and files are indexed to date and compose a valuable reference division.

The business details related to the JOURNAL have been executed with a view towards efficiency.

Insofar as existing engagements have permitted, your Secretary has attended many county and district meetings.

The time devoted to administrative details and duties has exceeded by many hours those commonly accepted as constituting full time service. At times we were confronted with most trying circumstances, problems and perplexities, occasioned by social, professional and economic events. I am deeply grateful for the advice and assistance given by officers, committees and members in determining action. Rarely did I seek to assume individual or unadvised responsibility and action. To serve and to achieve by serving has been my sole purpose.

In closing this, my twenty-first annual report, I am unable to summarize adequately my personal expressions of gratefulness for the confidence that has been reposed in me. I deeply appreciate the privileges and opportunities of having been privileged to serve.

In spite of the upheaval that is manifesting itself, in spite of the unrest that exists, I have full and abiding faith for the future and the independent role that will be retained by our profession in serving humanity. As long as we individually and collectively render adequate medical service and remain proficient, as long as we hold fast to our ideals, as long as we are not turned aside by a quest for temporary financial returns, as long as we are true to our science, then will our science care for us and we shall retain our independence, and medicine and its disciples will be in an honored, commanding position in social and governmental life.

Respectfully submitted,

(Signed) F. C. WARNSHUIS, *Secretary.*

SOCIETY EXPENSE—1933

January			
Barlow Bros.	$ 15.00		
G. R. Trust Co. Dep. Box	5.50		
H. W. Ten Broek & Sons	50.00		
Postal Tel. & Cable	3.11		
Long Distance Calls	1.65		
Western Union Tel. Co.	1.62		
R. V. Allen	1.25		
Old Kent Bank—Int. on Note	16.79		
Tisch-Hine Company	5.00		
		$	99.92
February			
49 Checks—Charge	$ .98		
F. C. Warnshuis	17.85		
F. C. Warnshuis	15.41		
Old Kent Bank—Int. on Note	40.73		
			74.97
March			
23 Checks—Charge	$ .46		
Taylors	7.95		
H. W. Ten Broek & Sons	27.50		
Addressograph Sales Agency	3.66		
Postal Tel. & Cable Co.	2.52		
W. B. Newton	30.23		
R. S. Anderson	10.22		
F. A. Baker	21.19		
C. W. Colwell	12.84		
A. F. Fischer	56.04		
J. F. Carrow	14.00		
Geo. M. Kesl	23.64		
F. C. Warnshuis—Pantlind Hotel	129.80		
Bixby's	2.15		
Addressograph Sales Agency	2.96		
Postal Tel. & Cable Co.	5.28		
J. M. Robb	35.53		
D. W. Fenton	9.83		
F. C. Warnshuis	7.32		
Sec'y Conference	7.00		
E. C. Hansen	17.93		
E. F. Sladek	21.03		
E. J. Evans	56.04		
John Burkart	6.96		
J. J. McCann	4.20		
L. W. Switzer	15.00		
M. E. Stone	4.80		
E. M. Highfield	9.24		
L. L. Savage	22.20		
S. Martin Tweedie	25.80		
W. E. Ward	8.86		
L. F. Foster	16.80		
R. J. Hubbell	6.00		
Florence Ames	14.94		
E. J. Brenner	19.76		
E. C. Baumgarten	13.00		
R. H. Alter	12.50		
Jos. N. Scher	12.50		
E. J. Dougher	18.15		
T. Y. Ho	7.48		
Harry B. Knapp	10.20		
R. L. Finch	7.56		
F. L. S. Reynolds	46.14		
W. C. Ellet	9.60		
C. G. Clippert	24.00		
Geo. F. Swanson	31.34		
W. B. Bloemendal	4.20		
Taylors	12.95		
Ward-Schopps	7.50		
			876.80
April			
8 Checks—Charge	$ .16		
Addressograph Sales Agency	1.88		
Paul Kniskern	25.20		
Taylors	3.70		
Postal Tel. & Cable Co.	1.88		
Long Distance Calls	5.75		
F. C. Warnshuis	9.06		
Old Kent Bank—Int. on Note	26.17		
			73.80
May			
86 Checks—Charge	$ 1.72		
F. C. Warnshuis	3.60		
Bruce Publishing Co.	18.42		
Addressograph Sales Agency	3.03		
Long Distance Calls	2.90		
Rogers Leather Goods Store	4.50		
Philip Riley	4.00		
Young & Chaffee—Storage	12.00		
Bruce Publishing Co.	9.60		
			59.77
June			
34 Checks—Charge	$ .68		
Taylors	10.75		
Secretary of State	2.00		
Master Reporting Co.	103.46		
Ernst & Ernst	167.82		
Postal Tel. & Cable Co.	1.55		
Western Union Tel. Co.	5.11		
J. M. Robb	38.95		
Long Distance Calls	16.65		
Old Kent Bank—Int. on Note	19.50		
			366.47

July		
34 Checks—Charge	$ .68	
Coupons Returned—Charge	.23	
Addressograph Sales Agency	1.42	
F. C. Warnshuis	5.28	
J. D. Bruce (Sawyer Tablet)	30.42	
Taylors	5.94	
Long Distance Calls	10.10	
		54.07
August		
35 Checks—Charge	$ .70	
Long Distance Calls	2.20	
Addressograph Sales Agency	2.04	
F. C. Warnshuis	10.90	
Master Reporting Co.	88.05	
J. M. Robb	48.11	
Western Union Tel. Co.	.55	
Taylors	6.96	
U. S. Laundry	3.84	
F. C. Warnshuis—Upper Peninsula	97.82	
		261.17
September		
32 Checks—Charge	$ .64	
Michigan Surety Co. Notary Bond	5.00	
Columbian Whse.	12.00	
G. R. Insurance Agency	62.50	
Detroit Clipping Bureau	3.65	
Addressograph Sales Agency	1.14	
Western Union Tel. Co.	2.26	
Taylors	6.29	
Tisch-Hine Co.	2.58	
H. R. Terryberry Co.	102.60	
Long Distance Calls	5.45	
		204.11
October		
21 Checks—Charge	$ .42	
Old Kent Bank—Int. on Note	37.50	
Emily Graversen's Notary App.	1.50	
Arthur Renslund	1.00	
Harold C. Mack	50.37	
G. R. Trust Co.—Box	5.50	
Detroit Clipping Co.	10.80	
Western Union Tel. Co.	3.18	
Taylors	8.86	
F. C. Warnshuis	19.62	
		138.75
November		
48 Checks—Charge	$ .96	
Long Distance Calls	7.10	
Bruce Publishing Co.	111.35	
Tisch-Hine Co.	1.22	
Ward-Schopps Co.	11.33	
Detroit Clipping Bureau	1.30	
The Forbes Co.	3.61	
Addressograph Sales Agency	3.37	
W. H. Kessler Co.	11.43	
Western Union Tel. Co.	8.10	
Postal Tel. & Cable Co.	1.10	
U. S. Laundry	.88	
F. C. Warnshuis	35.00	
		196.75
December		
30 Checks—Charge	$ .60	
Long Distance Calls	3.95	
F. C. Warnshuis	15.72	
Kessler Office Supplies	17.95	
Western Union Tel. Co.	9.98	
Postal Tel. & Cable Co.	.82	
Addressograph Sales Agency	6.32	
F. C. Warnshuis	42.42	
Detroit Clipping Bureau	5.05	
Bruce Publishing Co.	19.91	
Long Distance Calls	1.02	
F. C. Warnshuis	9.48	
Emily Graversen	7.00	
		140.22
		$2,546.80

POST GRADUATE CONFERENCES EXPENSES—1933

March		
The Camera Shop	$ 18.50	
F. C. Warnshuis	25.00	
		$ 43.50
April		
Robert C. Moehlig		10.00
May		
G. J. Curry	$ 9.50	
Frank Wilson	12.00	
Mrs. Dorothy Waller	12.00	
Robert Novy	12.00	
E. D. Spalding	12.00	
Norman Miller	10.50	
A. C. Furstenberg	10.50	
A. C. Curtis	10.50	
H. H. Riecker	10.50	
		99.50
June		
Harther L. Keim	$ 23.85	
Camera Shop	3.45	
Theo. Heavenrich	3.90	
		31.20
September		
Drs. Brown & Kretzschmar		94.55
		$ 278.75

ECONOMICS COMMITTEE EXPENSE—1933

November		
The University of Michigan Union	$	$ 7.88
December		
F. C. Warnshuis	2.58	
Philip Riley	15.15	
		17.73
		$ 25.61

COUZENS FOUNDATION

	Credit
Balance from 1932	$ 39.37

JOINT COMMITTEE RECEIPTS AND DISBURSEMENTS—1933

Receipts

Balance from 1932		$1,813.44
January		
Detroit News	$ 76.92	
Detroit News	76.92	
		153.84
March		
Detroit News		96.15
April		
Detroit News		76.92
May		
Detroit News	$ 76.92	
Detroit News	76.92	
		153.84
June		
Detroit News		96.15
July		
Detroit News		76.92
August		
Detroit News		96.15
September		
Detroit News		76.92
October		
Detroit News		76.92
November		
Detroit News		96.15
		$2,813.40

EXPENSES—1933

	Editor Salary	Editor Expense	Rent	Postage	Reprint Expense	Secretary	Stenographers
January	$ 208.00	$ 50.00	$ 100.00	$ 20.00	$ 9.20	$ 333.00	$ 210.00
February	208.00	51.28	132.60	30.00	.....	333.00	100.00
March	208.00	50.00	116.00	45.00	.....	330.00	275.00
April	208.00	50.00	116.00	44.45	420.45	336.00	165.00
May	208.00	50.00	116.00	21.89	68.70	333.00	165.00
June	208.00	50.00	116.00	30.00	128.50	333.00	165.00
July	200.00	58.00	116.00	20.00	33.15	333.00	165.00
August	200.00	58.00	116.00	38.00	51.10	333.00	75.00
			Tel. 2.20				
September	200.00	58.00	116.00	20.00	189.35	333.00	75.00
October	200.00	58.00	116.00	90.00	.....	333.00	75.00
November	200.00	58.00	116.00	40.00	82.35	333.00	111.00
			Tel. 7.10				
December	252.00	58.00	123.40	33.00	12.90	337.00	158.00
	$2,500.00	$649.28	$1,409.30	$432.34	$995.70	$4,000.00	$1,739.00
Less: $9.30 which were Tel. calls posted to rent in error	9.30						
	$1,400.00						

Disbursements

March		
Salaries	$175.00	
Salaries	175.00	
Mayer-Schairer Co.	21.00	
Don C. Lyons	38.00	
Salaries	175.00	
		$ 584.00
April		
Salaries		175.00
May		
Salaries		175.00
June		
Salaries		175.00
July		
Salaries	$175.00	
J. D. Bruce	51.88	
		226.88
August		
Salaries		175.00
September		
Salaries		175.00
October		
Salaries	$175.00	
The Mayer-Schairer Co.	4.64	
Don C. Lyons	48.00	
		227.64
November		
Salaries		175.00
December		
Salaries		175.00
		$2,263.62
Receipts	$2.813.40	
Disbursements	2,263.52	
Balance		$ 549.88

DELEGATES TO AMERICAN MEDICAL ASSOCIATION EXPENSES—1933

June		
L. J. Hirschman	$ 26.86	
C. S. Gorsline	43.42	
Carl F. Moll	47.21	
H. A. Luce	46.25	
L. J. Hirschman	20.00	
		$ 183.74
July		
J. D. Brook		33.35
		$ 217.09

PREVENTIVE MEDICINE EXPENSE—1933

May	
L. O. Geib	$ 20.00

CIVIC AND INDUSTRIAL RELATIONS COMMITTEE EXPENSES—1933

February	
Harrison S. Collisi	$ 8.88
June	
Harrison S. Collisi	10.48
September	
Harrison S. Collisi	1.10
	$ 20.46

LEGISLATIVE COMMITTEE—EXPENSES 1933

March		
Earl I. Carr		$ 80.96
June		
Earl I. Carr	$ 67.30	
Carl F. Moll	33.15	
		100.45
July		
J. M. Robb	$ 47.60	
E. I. Carr	157.66	
Western Union Tel. Co.	50.33	
		255.59
September		
W. C. McCutcheon		32.50
October		
Wayne County Medical Society	$673.80	
Wayne County Medical Society	815.95	
Wayne County Medical Society	192.50	
		1,682.25
November		
Wm. A. Hyland	$ 93.60	
Wayne County Medical Society	80.96	
Wayne County Medical Society	112.74	
		287.30
December		
E. I. Carr	$ 13.69	
James B. Bradley	21.48	
L. G. Christian	46.58	
Philip Riley	18.00	
		99.75
		$2,538.80

COUNCIL EXPENSE—1933

Note: Executive Committee Expenses are included in Chairman's and Secretary's accounts.

January		
F. C. Warnshuis (Hotel Statler)		$ 45.00
March		
Richard Burke	$ 50.00	
C. E. Boys	18.24	
H. R. Carstens	9.69	
Henry Cook	10.00	
Wm. A. Hyland	16.63	
G. L. Le Fevre	41.95	
J. Earl McIntyre	72.23	
Julius H. Powers	25.00	
F. C. Warnshuis	71.55	
B. H. Van Leuven	43.90	
Burton R. Corbus	73.50	
F. C. Warnshuis	15.38	
C. E. Boys	6.00	
Henry Carstens	13.75	
		467.82
April		
F. C. Warnshuis		20.10
May		
C. A. Neafie		3.00
June		
F. C. Warnshuis		11.50
July		
F. C. Warnshuis		13.41
August		
Henry Cook	$ 52.28	
F. A. Baker	8.64	
Theo. Heavenrich	11.86	
F. C. Warnshuis	4.00	
		76.78
September		
B. R. Corbus	$ 89.90	
Harlen MacMullen	31.60	
		121.50
October		
University of Michigan Union		11.59
November		
H. A. Luce		16.64
December		
P. R. Urmston	$107.14	
H. A. Luce	19.19	
		126.33
		$ 913.67

JOURNAL EXPENSE—1933

January		
Bruce Publishing Co.		$ 601.97
February		
Bruce Publishing Co.		648.96
March		
Bruce Publishing Co.		479.93
April		
Bruce Publishing Co.		721.02
May		
Bruce Publishing Co.		392.23
June		
Bruce Publishing Co.		362.49
July		
Bruce Publishing Co.		353.02
August		
Bruce Publishing Co.		493.96
September		
Bruce Publishing Co.	$469.14	
Long distance call to Bruce	2.84	
		471.98
October		
Bruce Publishing Co.		420.33
November		
Bruce Publishing Co.		620.78
December		
Bruce Publishing Co.		505.90
		$6,072.57

ANNUAL MEETING EXPENSE—1933

March		
G. H. Belote	$ 4.80	
G. J. Curry	7.20	
Ralph B. Fast	16.80	
A. R. Woodburne	11.50	
Merrill Wells	12.63	
		$ 52.93

July		
F. J. Mester, Jr.	$ 3.00	
Thomas Blue Print	6.00	
F. C. Warnshuis	16.80	
		25.80
August		
Bruce Publishing Co.	$ 12.54	
Roger L. Warnshuis—Blue Prints	25.00	
		37.54
September		
Roger L. Warnshuis—Signs	$ 20.00	
F. C. Warnshuis	18.00	
Pantlind Hotel	71.49	
D. P. Proos	13.00	
Ellsworth Letter & Cal. Service	16.75	
St. Louis Button Co.	55.52	
Bruce Publishing Co.	80.99	
T. Wingate Todd	40.66	
Civic Auditorium	225.00	
Donald Graversen	10.00	
		551.41
October		
F. A. Baker	$25.18	
E. D. Plass	50.00	
Welker Letter Co.	11.50	
The Camera Shop	10.00	
H. R. Sign Co.	8.00	
		104.68
November		
Master Report Co.	$211.18	
Evelyn M. Collar	5.00	
Thomas E. Jones	33.88	
		250.06
		$1,022.42
Credit for Exhibit Booths Sold		560.00
		$ 462.42

MEDICO-LEGAL DEFENSE

RECEIPTS AND DISBURSEMENTS—1933

Receipts

Balance from 1932		$1,739.74
January		
Dues		569.00
February		
Dues		367.00
March		
Dues	$470.50	
Interest on Bonds	30.00	
		500.50
April		
Dues		932.00
May		
Dues		1,206.00
June		
Dues	$156.00	
Interest on Bonds	247.50	
		403.50
July		
Dues	$744.58	
Interest on Bonds	27.50	
		772.08
August		
Dues		225.94
September		
Dues		110.80
October		
Dues		992.42
November		
Dues		264.71
December		
Dues	$104.77	
Interest on Bonds	250.00	
		354.77
		$8,438.46

Disbursements

March		
Wm. J. Stapleton, Jr., Jan. Salary	$83.33	
Do., Feb. Salary	83.33	
Do., Feb. Exp.	7.50	
Do., Mar. Salary	83.33	
		$ 257.49
April		
Wm. J. Stapleton, Jr., Salary		83.33
May		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Do., Expenses	2.68	
Herbert V. Barbour	750.00	
		836.01
June		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Douglas-Barbour	313.55	
		396.88
July		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Douglas-Barbour	250.00	
		333.33
August		
Wm. J. Stapleton, Jr., Salary		83.33
September		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Do., Expenses	2.00	
Douglas-Barbour	348.98	
		434.31
October		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Douglas-Barbour	175.00	
		258.33
November		
Wm. J. Stapleton, Jr., Salary	$ 83.33	
Do., Expenses	2.00	
Douglas-Barbour	103.72	
		189.05
December		
Wm. J. Stapleton, Jr., Salary	$ 83.37	
Douglas-Barbour	140.00	
		223.37
		$3,095.43
Receipts		$8,438.46
Disbursements		3,095.43
Balance		$5,343.03

HEALTH AGENCIES SURVEY

RECEIPTS AND DISBURSEMENTS—1933

Receipts

Sale of Health Survey Reports

May		
10 Books @ $2.50	$ 25.00	
June		
34 Books @ $2.50	85.00	
July		
10 Books @ $2.50	25.00	
August		
10 Books @ $2.50	25.00	
September		
4 Books @ $2.50	10.00	
October		
5 Books @ $2.50	12.50	
November		
23 Books @ $2.50	57.50	
December		
2 Books @ $2.50	5.00	
		$ 245.00

Disbursements

March		
Nathan Sinai—Salary	$ 250.00	
Nathan Sinai—Expense	459.10	
Ward Schopps, Company	15.00	
F. C. Warnshuis	14.60	
		$ 738.70
April		
Nathan Sinai—Expense	$ 622.43	
F. C. Warnshuis	50.00	
		672.43
May		
C. S. Gorsline	$ 19.60	
Nathan Sinai—Expense	140.88	
Nathan Sinai—Expense	207.61	
W. H. Marshall	120.00	
F. C. Warnshuis, Detroit-Statler	98.40	
F. C. Warnshuis, "	50.00	
		636.49
June		
L. G. Christian	$ 44.73	
F. C. Warnshuis	14.45	
F. C. Warnshuis	11.26	
C. S. Gorsline	6.30	
F. C. Warnshuis	125.00	
Nathan Sinai—Expense	50.00	
		251.74
July		
Edwards Bros.	$1,169.64	
F. C. Warnshuis	6.36	
F. C. Warnshuis	9.06	
Nathan Sinai—Salary	1,500.00	
Nathan Sinai—Expense	431.42	
		3,116.48
August		
Detroit Clipping Bureau		11.60
September		
Nathan Sinai—Expense		195.64
		$5,623.08
Receipts		245.00
Balance		$5,378.08

Grand Rapids, January 10, 1934.

Michigan State Medical Society,
Grand Rapids, Michigan.

Gentlemen:

We have made an examination of the general accounts of the MICHIGAN STATE MEDICAL SOCIETY for the year ended December 23, 1933.

In addition to an examination of the accounts pertaining to the assets and liabilities of the Society at December 23, 1933, we have reviewed the operating accounts and have made tests of the recorded cash transactions for the year then ended. The scope of our work and the extent of the detailed records examined are outlined in later sections of this report.

The Society was incorporated as an association not for pecuniary profit under the laws of the State of Michigan on September 17, 1910. The purpose of the Society is the federation and protection of the medical profession and the extension of medical knowledge. The Society publishes THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

FINANCIAL ANALYSIS

A balance sheet is included herein which, in our opinion, shows the financial condition of the Society as of December 23, 1933, on the basis outlined in this report. The following statement affords a comparison of the assets and liabilities at the beginning and end of the year.

Assets

	Dec. 23, 1933	Dec. 24, 1932	Increase Decrease
Cash	$ 1,044.43	$ 459.05	$ 585.38
Notes and accounts receivable	1,482.73	1,565.56	82.83
Securities—at cost, less allowance	18,310.00	20,935.00	2,625.00
Contract for medical history	------	3,000.00	3,000.00
Deferred expenses	54.62	------	54.62
	$20,891.78	$25,959.61	$ 5,067.83

Liabilities

Notes payable	$ 2,500.00	$ 3,800.00	$ 1,300.00
Accounts payable	889.87	1,984.31	1,094.44
Unearned income	928.75	------	928.75
Reserves:			
For Medico Legal Defense Fund	$11,808.03	$ 8,107.24	$ 3,700.79
For medical history	------	3,000.00	3,000.00
	$11,808.03	$11,107.24	$ 700.79
Net worth	4,765.13	9,068.06	4,302.93
	$20,891.78	$25,959.61	$ 5,067.83

The cash on deposit is available on an unrestricted basis.

Notes receivable were accepted in payment of dues for the years 1931, 1932 and 1933, and were due as follows:

Due Date	Amount
December 1, 1932	$320.00
December 1, 1933	197.50
January 1, 1934	8.75
February 1, 1934	8.75
Total	$535.00

The notes bear interest at 5 per cent, but no charge for interest has been made on notes paid by members during the current year.

Advertisers' accounts receivable were analyzed by us as to date of charge and are classified in comparison with the balances at December 24, 1932.

The amount shown as due from county societies represents dues collected for the Society and subsequently impounded in depositary banks. These accounts are payable pro rata as the funds of the county societies are released by the banks.

Accounts receivable for medical history arose through the sale of the medical history. These accounts are principally due from members in good standing and the Secretary advised us that they would ultimately be paid.

Based upon our analysis of the notes and accounts and conference with the Secretary as to their collectibility, it is our opinion that the allowance for doubtful accounts in the amount of $700.00 is sufficient to care for losses anticipated thereon at December 23, 1933.

We have included hereinafter a schedule of the bonds owned by the Society which shows the par value, cost and approximate market value as of December 23, 1933. Market values are based on closing market quotations at December 23, 1933, where available. Unlisted bonds were valued on the basis of information received from brokers as to the latest bid or sales prices. An allowance in the amount of $23,208.75 has been provided to reduce the book value to approximate market value at December 23, 1933. Bonds having a total par value of $5,000.00 have been pledged as collateral security for a note payable of $2,500.00. During the year, bonds of the Palmer Building Corporation having a par and cost value of $2,000.00 were sold for $150.00, resulting in a loss of $1,850.00. These bonds were a part of the general fund of the Society and were stated at a net value of $500.00 in the annual report for 1932.

The item classified as a deferred charge represents expenses for stationery and printing which are properly chargeable against future operations of the Society.

At December 23, 1933, approximately 124 sets of the Medical History were in the hands of the publishers, but owing to the small number of sales, no consideration has been given to the inventory value thereof.

As far as we could ascertain, provision has been made for all known liabilities of the Society. Invoices for services rendered and expenses incurred by the Committee on Economics have not been acknowledged as liabilities of the Society and therefore have not been included in the preparation of this report.

The recorded transactions entering into the fund administered by the Society for the Joint Committee on Public Health Education are shown in an exhibit included as a part of this report. There was no change during the year in the balance due the Couzens' Foundation.

Payments received to apply on dues for the year 1934 have been shown as unearned income and, in our opinion, represent income applicable to the following year.

The reserve for the Medico-Legal Defense Fund represents the amount set aside to be used for the protection of the medical profession. An amount of $2.00 from each member's dues for the year has been allocated to this fund. A summary is included hereinafter showing the changes in the fund for the year ended December 23, 1933.

The net worth of the Society decreased $4,302.93 during the year of which amount a total of $2,572.50 was due to the additional provision necessary to reduce bonds to indicated market value and to the loss on the sale of $2,000.00 par value of Palmer Building Corporation bonds.

Surety bonds issued on Dr. William A. Hyland and Dr. Frederick C. Warnshuis, in the amounts of $25,000.00 and $10,000.00, respectively, were examined by us.

OPERATIONS

We present elsewhere in this report a statement of income and expense showing the results from activities for the year ended December 23, 1933. The scope of our work in connection with the preparation of this statement consisted of test checks of the cash and operating transactions as hereinafter outlined. A comparison of the income and expense for the years ended December 23, 1933, and December 24, 1932, is shown by the following summary:

Income

	Year Ended Dec. 23, 1933	Dec. 24, 1932	Increase Decrease
Membership dues	$16,021.50	$21,282.99	$ 5,261.49
Journal revenue	11,697.88	16,815.03	5,117.15
Interest received	1,210.01	1,486.38	276.37
Sales of medical history	10.00	20.00	10.00
	$28,939.39	$39,604.40	$10,665.01
Less dues refunded	------	8,132.87	8,132.87
Total Income	$28,939.39	$31,471.53	$ 2,532.14

Expenses

Administrative and general	$ 8,345.94	$ 8,700.47	$ 354.53
Society activities	3,365.38	3,764.52	399.14
Committee expenses	8,261.70	5,479.66	2,782.04
Journal expenses	10,217.55	12,642.66	2,425.11
Other deductions	829.25	------	829.25
Total Expenses	$31,019.82	$30,587.31	$ 432.51
Net Income or Deficit	$ 2,080.43	$ 884.22	$ 2,964.65

SCOPE OF EXAMINATION

The scope and nature of our examination are outlined in the following comments:

Cash on deposit was verified by direct correspondence with the depositary bank and reconcilement of the balance reported by the bank with the amount shown herein. Cash on hand was counted during the course of our examination. The cash receipts recorded for the year were compared with the bank deposits as shown by the bank statements on file. The recorded cash disbursements for three months of the year selected by us, were found, with minor exceptions, to be supported by canceled checks, invoices or other memoranda.

Notes receivable were inspected by us. Advertisers' and other accounts receivable were found to be in agreement with trial balances of the individual accounts. We did not correspond with any of the debtors to confirm the correctness of the book records.

Bonds owned by the Society, except for $5,000.00 par value pledged as collateral security, were inspected by us. Bonds pledged as collateral security were verified by correspondence with the Bank.

In addition to a test of the cash transactions, as heretofore outlined, we tested the amount of dues collected by comparison with the Secretary's records of paid memberships. Interest received was verified by accounting for the coupons clipped since our examination as of December 24, 1932, and all unpaid coupons of defaulted bonds were examined by us. Major expense charges were investigated and all items so examined were found to be in order.

Very truly yours,

ERNST & ERNST,

[Seal] *Certified Public Accountants.*

BALANCE SHEET

MICHIGAN STATE MEDICAL SOCIETY

DECEMBER 23, 1933

Assets

	Year Ended Dec. 23, 1933	Dec. 24, 1932	Increase Decrease
Cash			
On deposit—commercial account		$ 230.68	
Certificate of deposit		533.75	
For deposit		280.00	
			$ 1,044.43
Notes and Accounts Receivable			
Notes receivable for dues	$ 535.00		
Advertisers' accounts	1,103.22		
Dues from county societies	347.51		
Advance to member	100.00		
Accounts receivable for medical history	97.00		
		$ 2,182.73	
Less allowance for possible losses		700.00	
			1,482.73
Securities			
Bonds—at Cost ($5,000.00 par value pledged)		$41,518.75	
Less allowance to reduce to approximate market value		23,208.75	
			18,310.00
Deferred			
Supplies for year 1934			54.62
			$20.891.78

Liabilities

Note Payable			
To Old Kent Bank—secured by bonds having a par value of $5,000.00			$ 2,500.00
Accounts Payable			
To vendors for 1933 expenses		$ 194.62	
Joint Committee on Public Health Education		549.88	
Advances for reprints		106.00	
Couzens' Foundation		39.37	
			889.87
Unearned Income			
Dues for year 1934			928.75
Reserve			
For Medico-Legal Defense Fund			11,808.03
Net Worth			
Balance at December 26, 1932		$ 9,068.06	
Less: Net loss for the year ended December 23, 1933	$ 2,080.43		
Additional provision to reduce bonds to approximate market value	2,222.50		
		4,302.93	
			4,765.13
			$20,891.78

This balance sheet is subject to the comments contained in this report.

INCOME AND EXPENSE
MICHIGAN STATE MEDICAL SOCIETY

Income

	Year Ended Dec. 23, 1933	Year Ended Dec. 24, 1932	Increase Decrease
Membership fees	$16,021.50	$21,282.99	$ 5,261.49
Journal subscriptions	4,789.67	8,333.17	3,543.50
Advertising sales	5,543.66	6,234.94	691.28
Reprint sales	1,249.28	1,780.97	531.69
Interest received	1,210.01	1,486.38	276.37
Journal cuts	115.27	465.95	350.68
Sale of medical history	10.00	20.00	10.00
	$28,939.39	$39,604.40	$10,665.01
Less dues refunded	------	8,132.87	8,132.87
TOTAL INCOME	$28,939.39	$31,471.53	$ 2,532.14

Expenses

Administrative and General			
Secretary's salary	$ 4,000.00	$ 4,204.00	$ 204.00
Stenographers' salaries	1,739.00	2,165.00	426.00
Office rent	1,400.00	1,250.00	150.00
Postage	432.34	197.92	234.42
Sundry general expense	774.60	883.55	108.95
	$ 8,345.94	$ 8,700.47	$ 354.53
Society Activities			
Annual meeting	$ 462.42	$ 1,369.06	$ 906.64
Council expenses	913.67	996.87	83.20
Delegates to American Medical Association	217.09	887.44	670.35
Sundry society expense	1,772.20	511.15	1,261.05
	$ 3,365.38	$ 3,764.52	$ 399.14
Committee Expense			
Survey of medical service and health agencies	$ 5,378.08	$ 4,484.88	$ 893.20
Legislative committee	2,538.80	122.17	2,416.63
Post graduate conferences	278.75	410.29	131.54
Economics committee	25.61	------	25.61
Civic and industrial relations	20.46	9.00	11.46
Preventive medicine	20.00	------	20.00
Radio committee	------	146.45	146.45
Cancer committee	------	56.87	56.87
Donation to Joint Committee on Public Health Education	------	250.00	250.00
	$ 8,261.70	$ 5,479.66	$ 2,782.04
Journal Expenses			
Editor's salary	$ 2,500.00	$ 2,500.00	------
Editor's expenses	649.28	996.15	346.87
Printing expense	6,072.57	7,690.38	1,617.81
Cost of reprints	995.70	1,456.13	460.43
	$10,217.55	$12,642.66	$ 2,425.11
Other Deductions			
Loss of $1,850.00 on bonds sold, less allowance of $1,500.00 previously provided for shrinkage in market value thereof	$ 350.00	------	$ 350.00
Bad accounts charged off and provided for	479.25	------	479.25
	$ 829.25	------	$ 829.25
TOTAL EXPENSES	$31,019.82	$30,587.31	$ 432.51
NET INCOME OR DEFICIT	$ 2,080.43	$ 884.22	$ 2,964.65

SUMMARY OF INCOME AND EXPENSE—JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION
MICHIGAN STATE MEDICAL SOCIETY
YEAR ENDED DECEMBER 23, 1933

Balance Due Joint Committee—December 26, 1932			$ 1,813.44
Income			
The Detroit News—for articles published			999.96
			$ 2,813.40
Expenses			
Salaries:			
Mabel Kelly	$ 1,200.00		
Herman Rucker	900.00	$ 2,100.00	
Mayer-Schairer Company		25.64	
Don E. Lyons		86.00	
J. D. Bruce		51.88	2,263.52
BALANCE DUE JOINT COMMITTEE, December 23, 1933			$ 549.88

SUMMARY OF CHANGES IN MEDICO-LEGAL DEFENSE FUND RESERVE
MICHIGAN STATE MEDICAL SOCIETY
YEAR ENDED DECEMBER 23, 1933

Balance in Medico-Legal Defense Fund—December 26, 1932		$ 8,107.24
Income		
Dues from members	$ 6,143.72	
Interest on bonds	555.00	6,698.72
		$14,805.96
Expenses		
Douglas, Barbour, Dusenberg & Purdy for legal services	$ 2,081.25	
William Stapleton, Jr.—salary	1,000.00	
Postage and miscellaneous	14.18	3,095.43
		$11,710.53
Decrease in allowance for reduction of bonds to market value		97.50
BALANCE IN MEDICOL-LEGAL DEFENSE FUND at December 23, 1933		$11,808.03

The above report, insofar as related to County Society problems, was referred to the Committee on County Societies. Those related to Finances were referred to the Committee on Finance and those related to Publication were referred to the Committee on Publication.

5. Prof. W. E. Henderson, Director of the Extension Division of the University of Michigan, presented the following report for the Joint Committee on Public Health Education:

REPORT OF THE JOINT COMMITTEE ON HEALTH EDUCATION

It was deemed advisable, this year, not to call a full meeting of the Joint Committee together at the time of the Council meeting in Detroit but to submit a report of the health education work done during the current year up to date.

On account of the financial condition at the beginning of the year it was necessary to discontinue the services of Dr. Soller as field organizer in connection with health education lectures. This was a set-back so far as the activities of the Joint Committee health program in connection with high school assemblies was concerned. It was necessary, therefore, to make assignments as far as possible in the various centers of the State through the medium of correspondence, as relating both to program committees and to the physicians and dentists interested in the work. During October, November, and December, health lectures were assigned in the following centers: Adrian, Almont, Niles, Northville, Plymouth, Grand Rapids, Jackson, Lansing, Montgomery, Saline, Detroit, Escanaba, Eaton Rapids, Hesperia, Fremont, and Three Rivers.

Other assignments, of course, will be made during the remainder of the year. I find that it is not difficult to arrange with clubs and high school assemblies for health lectures. The great difficulty experienced at the present time is in getting doctors to undertake the work, especially when any considerable driving is to be done. The main objection, no doubt, is the expense involved, since no provision is made for taking care of traveling expenses in connection with these lectures.

The matter of expenses, however, is not the whole story. I find that a personal contact from time to time with the doctors is necessary to keep an interest in the work. This contact with County Medical Society groups and local physicians and dentists is even more important in work of this sort than the contact with the high school principals and other educators.

The correctness of this observation is strikingly verified by a new experiment which we have undertaken in connection with the health work, namely, the organization of rural communities. Heretofore we have devoted our attention mainly to health lectures in connection with city, town, and village schools, and have made very little attempt to organize the rural schools of the various counties. I have felt, for quite some time, that the county organization would be worth trying and this year the opportunity presented itself. Last year Mrs. T. S. Webber of Ypsilanti, who, I believe, was connected with the health committee of the Washtenaw County Federation of Women's Clubs, conceived the idea of having health lectures given in certain district schools of the county, especially in places where she was personally acquainted. A good start was made last year. As a result of this work the Washtenaw County Medical Society appointed a committee, consisting of Doctors Gladys Kleinschmidt, and Forsythe of Ann Arbor, and Dr. Snow of Ypsilanti. This committee applied to the Extension Division for information and such assistance as might be available in connection with the organization of the work, their main objective being to find some source of revenue for the payment of traveling expenses, telephone calls, and so forth, incident to the organization of the county schools. After a conference with the committee it was suggested that a larger committee be appointed including, in addition to the three doctors selected to represent the County Medical Society, the County Superintendent of Schools, County Nurse, Mrs. Webber representing the County Federation of Women's Clubs, and Dr. C. A. Fisher of the University Extension Division. The Extension Division agreed to finance the project up to a certain amount.

The work of organization was done through the medium of personal visits to the various country schools by the County Superintendent of Schools, Dr. Gladys Kleinschmidt, and Mrs. Weber. Most of these visits were made by Mrs. Weber, who is thoroughly acquainted with the county as a result of her previous exeperience. There are 130 one-room rural schools in operation in Washtenaw County. Up to date health programs have been arranged in 93 schools. The plan, as carried out by the committee, is about as follows:

The first step is to have some person, such as the County Superintendent, or other representative of the committee, get in touch with the district through the medium of the local teacher and the district school board. If all concerned are agreeable to the idea, of having one or more health lectures given, the school then makes a formal request for such a program. This request is sent to the chairman of the County Medical Society committee who arranges for the speakers. In some cases the doctors use their own cars while in other cases

members of the Kiwanis Clubs of Ann Arbor and Ypsilanti have provided transportation.

The doctors chosen for these programs, as arranged thus far, are as follows: Doctors Forsythe, Ross, Wisdom, Fopeana, Emerson, Gladys Kleinschmidt, Earl E. Kleinschmidt, Jacox, Jiminez, Brace, Wessinger, Sheldon, Solis, Law, Freyberg, Watson, Rugen, and Sacks of Ann Arbor; Dr. DeTar of Milan, James Foreman, D.D.S., of Clinton; Dr. Worth of Ypsilanti; Dr. Durfee of Dexter; Dr. Gates, Mr. Nebulung, Mr. Baroskey, Mr. Block, Miss Sprague, and Miss Spoeneman of the University staff and Mrs. Flora Brown of the Tuberculosis Association. This makes a total of 31.

Sixty-five lectures in the series have thus far been given and arrangements for forty more are in progress. Most of these lectures were given in rural schools, although some were given in connection with grange meetings and other local groups. Reports of the lectures up to date show an average attendance of fifty. When we consider that in most of our rural schools the attendance is usually not more than twenty at the outside, the average attendance of fifty means that a relatively large percentage of parents were present.

The time required for the organization of the work in these ninety-three schools was about fifteen days, with a total car mileage of 1,270 miles.

Lectures outlines on subjects previously approved by the Joint Committee were furnished to the doctors. In addition to this there were added to our list of illustrative material for these lectures some 30 slides which were prepared and paid for by the Extension Division. The Extension Division also paid the mileage charges and telephone and postage bills.

The Washtenaw County health project may be taken as an indication of what might be done in other counties of the State, provided the local Medical Society and the County Superintendent of Schools agreed upon a coöperative working plan. In addition to this, of course, it would be necessary probably to have some local person interested in health work assist the County Superintendent of Schools and the chairman of the health education committee of the county medical society to get in touch with the rural communities. If such a plan should be carried out next year in other counties, I cannot too strongly urge the necessity of securing the coöperation of the County Superintendent of Schools.

Experience during the past five or six years has demonstrated the fact that if a well organized and continuous health program is to be carried on through the assistance of physicians and dentists of the State, some person should be employed to act as contact man for both the schools and the professional men concerned. This person should preferably hold an M.D. degree. This gives him a standing, both with the schools and with the doctors. In addition, he should have certain qualifications as a speaker. Until such a field man can be secured for our health education work, as outlined by the Joint Committee, it will be necessary for us to carry the work on as best we can through the office of the Extension Division or such agencies as may be available.

W. D. HENDERSON, *Secretary.*

The above report was discussed by Dr. J. D. Bruce of Ann Arbor. The Chairman referred the report to the Committee on County Societies.

6. The Editor, J. H. Dempster, submitted the following as his report for the year as Editor:

EDITOR'S REPORT

To the President, Chairman of the Publication Committee and Members of the Council:

It has been one of my pleasant duties each year since my appointment as editor of THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY to give a report of the year that has just closed, which report refers, I hope, in a modest way to what the editor has done as well as what he has attempted to do. My constant effort has been to keep THE JOURNAL up to a certain standard. The aim has been high. Probably not so much can be said of the performance. As I have said in previous reports, the twelve issues of the year are before you to judge for yourselves. It is almost needless to say that the diminution of finances as compared with the fat years has necessitated a smaller journal. This has been accomplished largely through a matter of selection. Your editor is firmly of the belief that the shorter article stands a greater chance of being read by a larger number of doctors than those of greater length. He has accordingly, where quality permitted it, given preference to the briefer article. While THE JOURNAL for 1933 is 150 pages smaller than that of 1932, it contains only eighteen papers, or an average of one and a half a month less than the 1932 JOURNAL. The number of editorials in 1932, Volume 31, was seventy-three, while the number for Volume 32 (1933) was sixty-four. The call for space in THE JOURNAL goes on unabated and the papers vary in length from those which can be read in a few minutes to several the size of an ordinary monograph.

Editorially we have confined ourselves to such subjects as any editor might be expected to discuss with a fair degree of intelligence. They have been subjects for the most part economic and sociologic in character. The more scientifically technical subject is for the specialist. One feature of Volume 32 (1933) which is worthy of comment is the publication of the lectures which are given each year by the Beaumont Foundation under the auspices of the Wayne County Medical Society. The 1933 lectures, three in number, by the noted physiologist of Harvard University Medical School, Dr. W. B. Cannon, marked the 100th Anniversary of the publication of William Beaumont's epoch-making book which contained his discoveries in the physiology of digestion. These lectures have since been reprinted in a limited edition.

Regarding the quality of contributed articles we might say that it shows an improvement each year and since the largest room in the world is the room for improvement, it is hoped that writers for the medical press may treat the matter very seriously even to the extent of re-writing their papers several times, if need be, under competent criticism.

The Publication Committee have been of material assistance and my sincere thanks is accorded them; while I have endeavored to refrain from bothering them with the details of the editorial function, I have not been backward in consulting them on matters involving editorial policy. I have had the fullest and most satisfactory coöperation from the Secretary in his capacity as business manager of THE JOURNAL.

The coöperation of the publisher, likewise, has been beyond reproach. The typographical quality of a journal is, of course, the work of the publisher, who can make or mar the efforts of contributor and editor when each has done his best.

J. H. DEMPSTER.

This was referred to the Publication Committee.

7. J. B. Bradley, Chairman of the Legislative Committee, addressed the Council on the program of the policies of his Committee. These were discussed in detail, but no specific action was taken by the Council other than to commend Dr. Bradley and his committee for their aggressive activity.

8. The Secretary presented several communications from the Crippled Children's Commission, from the Marquette-Alger County Society and from certain other county organizations. These were discussed by Drs. Manthei, Baker, Perry and Bruce. No action was taken at this time, inasmuch as the Secretary reported that Dr. Fensch, a member of the State Commission, would appear before the Council at a later hour.

9. The Chairman and the Secretary outlined the activities that had been pursued by the officers and the Executive Committee in all matters related to the State application of the regulations of Federal Emergency Relief Commission and the C. W. A. These were referred to the Committee on County Societies.

10. The Treasurer, William A. Hyland, presented the following as his annual report:

TREASURER'S REPORT—1933

Members of the Council:

I have the honor to present to the members of the Michigan State Medical Society my report as Treasurer for the year 1933.

As required by the by-laws of the Society, the usual indemnity bond was filed with the State Secretary.

The following bonds are now in my holding:

Peoples Light and Power Corp.	5½%	2,000
New England Gas & Electric Co.	5%	2,000
Am. Telephone and Telegraph Co.	5%	2,000
Community Power and Light Co.	5%	2,000
Pennsylvania Railroad Co.	5%	2,000
National Electric Power Co.	5%	5,000
Herald Square Building	6%	2,000
United Light and Power Corp.	5½%	2,000
Lower Broadway Properties, Inc.	6%	2,000
Associated Gas and Electric Corp.	5%	2,000
New York Central Railroad Co.	4%	2,000
G. R. Affiliated Corp.	5%	7,000
Palmer Building Corp.	6%	2,000

Regarding the foregoing, I wish to make the following statement:

Palmer Building Corporation—$2,000—check for $150, principal, dated October 25, 1933, delivered to the State Secretary. Bonds in default.

Lower Broadway Properties, Inc. Bonds in default.

I hold Certificate of Deposit of the National Gas and Electric Corporation—$2,400, signed by the Northern Trust Co.

Also hold receipt for Certificate of Deposit covering $3,000 Michigan Fuel and Light Co., 6 per cent Series "A" Bonds, to be exchanged for new securities.

The following bonds were authorized to be used as collateral by the Secretary for various loans and were deposited and returned when the notes were paid in full as follows:

November 22, 1932—Loan from bank	$1,500.00
December 31, 1932 " " "	2,300.00
	$3,800.00
Collateral:	
New York Central Railroad Co.	2,000.00
Pennsylvania Railroad Co.	1,000.00
G. R. Affiliated Corporation	5,000.00

June 16, 1933—Paid in full and collateral returned.

July 12, 1933—Loan from bank	$2,500.00
Collateral:	
American Telephone and Telegraph Co.	2,000.00
Pennsylvania Railroad Co.	1,000.00
International Telephone and Teleg. Co.	2,000.00

Loan has not been paid to date.

I attach hereto your Auditor's rating.

Respectfully,

WILLIAM A. HYLAND, *Treasurer.*

This was referred to the Finance Committee.

11. Dr. William J. Stapleton, Jr., Chairman of the Medico-Legal Committee, submitted the following as his annual report:

REPORT OF MEDICO-LEGAL COMMITTEE

MEDICO-LEGAL REPORT

Following is the report of the Medico-Legal Committee for the year 1933. The chairman desires to thank the members of the committee for their part in carrying on the work. A special word of thanks is due Dr. Angus McLean for his valuable help and counsel and his appearance in court. Thanks are also due our attorney, Mr. Herbert Barbour, and Mr. Purdy, of his office, who have been of much help in the year's work. The intercourse between the committee and Mr. Barbour's office has been most cordial and helpful. We also extend our thanks to Dr. F. C. Warnshuis, Secretary, for his help.

As in previous reports, we again call attention to the many malpractice cases. The cases listed do not include the many threats which have not as yet reached the courts. We feel that every physician should be on his guard constantly so as to avoid any reason, real or alleged, for a malpractice suit. It behooves every one of us, general practitioner and specialist, to be very careful how we act toward people who come to us. This is especially true where complaints are registered against the former physician. *An unwise statement may be the cause of a malpractice suit.* Again we stress the fact that x-rays should be taken in all fracture cases before and after reduction and before discharge. It also is wise to pay particular attention to any cases you take care of for the Welfare or in the various projects sponsored by the City, State or National Government.

The question of what constitutes a correct and sufficient examination has been fought out in the courts. This refers to the matter of blood counts, taking of temperatures and the method of examination. Also the question of when a physician should make a call. We feel that all physicians should acquaint themselves with their right and privileges as doctors. We suggest the reading of such a book as "Medical Jurisprudence," by Scheffel. The malpractice suit is now generally accepted as a type of a "racket." No physician can afford to practice without protection of some kind. Verdicts are being given against physicians in all sorts of cases by juries. Some of the verdicts have been very large.

We have caused to be published in our JOURNAL and have made talks regarding malpractice to various groups. With all our efforts the cases are increasing. Whether it is as Mr. Barbour states in his

report a desire to secure easy money or not it is up to each of us to guard not only oneself but his brother doctor in every way. We are surely "our brother's keeper" in these days. The old saying, "United We Stand, Divided We Fall," applies to the doctors not only in the menace of malpractice but to the whole fabric of medicine.

We ask your careful consideration of Mr. Barbour's report.

PARTIAL CLASSIFICATION

Treatment of eye case.
Treatment of jaw.
Steel in eye (2).
Burn by electrode—burn by heat lamp—11.
Hernia operation—$250,000 asked—settled for $50.00.
Scrotal hernia—Hernia operation—2.
Fracture—leg—6.
Fracture—improper setting—2.
Fracture—resulting in amputation.
Fracture—elbow joint.
Fracture—leg.
Fracture—shoulder.
Fracture—shoulder.
Fracture—improper setting.
Fracture—arm—3.
Heat machine—burn.
Loss of service by husband.
Chronic appendicitis—alleged malpractice.
Treatment of infection of nose.
Mental case—improper restraint.
Demands for refund of money.
Breaking off of needle in doing spinal puncture.
Breaking off of needle in right breast.
Failure to properly diagnose spinal meningitis.
Removal of wrong bone in wrist operation.
Sinus operation.
Assault and battery.
Confinement case—lack of care—1.
Confinement cases—burned by solution used by doctor—2.
Removal of tonsils resulting in loss of sight.
Removal of tonsils—deaf while taking anesthetic.
Improper methods to have plaintiff declared incompetent.
Improper diagnosis and treatment—3.
Death following treatment.
Threats—8 cases.
Vokeman's paralysis following fracture.
Malpractice: involving amputation of finger; when doctor is dead; in operating; after operation; in operating; alleging doctor did not make proper check of glasses after prescription was filled; following operation when rubber tube was used for drainage and adhesive plaster was used instead of a safety pin; poliomyelitis—alleged wrong diagnosis; goiter operation; extraction of teeth—not enough attention; burn by iodine following abdominal and vaginal operation; automobile accident—wrong treatment; hemmorhoids—death following anesthetic; kidney operation—leaving of drainage sponge in wound (leaving sponge serious), the doctor is dead and suit is against the estate; cross bill alleging malpractice.

We started to keep a record of the telephone calls and office consultation regarding various phases of medico-legal matter, but gave it up. A few of the cases will give you an idea.

1. Does a doctor have to obey a subpoena?
2. Does a doctor have to act as an expert witness?
3. Does a doctor have to give information in a case?
4. What about our duties testifying against another in court?
5. What can be done about a man who calls himself a doctor?
6. Doctor asks information regarding a morphine addict threatening him.
7. What about fees for testifying for insurance companies?
8. Asked to obtain proper release forms for hospitals.
9. Asked by attorney to provide him with an expert.
10. Dr. McLean and I had conference with Mr. Barbour resulting in 30 per cent discount on all service for 1933.
11. Consultation with Medical Protection Company regarding situation in Allegan County.
12. Doctors and clinics: Can a doctor doing clinic work be sued?
13. Matter of doctor acting in adoption case.
14. Can a doctor charge for telephone call?
15. Doctor acting as witness in a will case.

The above are just a few—every case requires correspondence, talks with the attorney and with the doctors. There is much personal contact in these cases.

The committee would appreciate any constructive cricticism.

INDEMNITY INSURANCE

The Medico-Legal Committee received a letter from the Secretary of the Society regarding a study and investigation of malpractice insurance. You have each received a copy of the same and for that reason the letter is not given here. In this letter was set forth the various phases of the question. The chairman of the Medico-Legal Committee was requested to take the matter up with his committee and with our attorney, Mr. Herbert Barbour, and supply such additional facts and recommendations as they thought pertinent to the Council.

This letter was accompanied by a proposed group plan of insurance from the Aetna Insurance Co. This you are also familiar with. We have placed in this report correspondence with the Aetna Company.

1. The Secretary has given an excellent résumé of the work of the committee.

2. Your chairman sent letters to Doctors Bruce, Carr and Manwarring of the committee. The question has been talked over numerous times with Dr. Angus McLean. The letters of Doctors Carr and Manwarring are presented as part of the report and should be read as expressing their sentiments regarding the plan.

Dr. Angus McLean is of the opinion that the present method is the correct one. Dr. Bruce has not replied. Mr. Herbert Barbour's letter is made part of this report. We have gone into the matter quite fully but not sufficiently to exhaust all sources of information.

1. The main objection to the present method is one of finance. As our Secretary so ably states, we do not see how any great reduction can be made by use of the group plan.

2. There is also this objection—some members feel they are paying for the upkeep of the Medical Defense beside carrying on other insurance. Even if they were given a credit of some sort, it would be only a small amount. In this connection, I would like to have definite information as to how many members actually carry additional insurance. Estimates vary from 25 to 50 per cent of the membership.

3. There is also the question of a monopoly—also a legal point (see case of DeHaan vs. Winter) Vol. 262—Michigan Reports, on page 192—a copy is enclosed.

4. I have had some correspondence with the New York Academy of Medicine and New York State Medical Society, where the Aetna have a group plan. The prices for insurance are much higher than the one offered us in Michigan. We have also received information from Ohio, Illinois and the A. M. A. Illinois State Medical Society use the same plan as our present one—cost $1.20 per member a year. Ohio budgets a lump sum of $5,000 a year. Their per capita is from 40 to 60 cents a year. A. M. A.—In the *Bulletin of the A. M. A.* for December, 1926, January and February, 1927, and December, 1928, are exhaustive reports of the Medical Defense Methods of the various state societies. We will have these copies at the meeting for your use, if desired.

5. There is no assurance that the amounts offered this year will be the same in years to come. This will depend, as I understand it, on the experience of the company.

6. In Doctor Manwarring's report there is a long list of the various group plans. I am sending this along for your information.

In my own opinion, I think the matter is one that requires considerable study. It means a change in

the Constitution of the Society. It cannot be put into force at once and for that reason the necessary machinery must be kept in working order. The new company would, of course, not take over the present litigation. Just how long a time would be necessary to get the plan in working order no one can tell. The above suggestions, together with the various enclosures make up a preliminary report for your consideration.

Respectfully submitted,
WILLIAM J. STAPLETON, JR., *Chairman.*

Mr. Herbert V. Barbour, the Society's attorney, addressed the Council upon the problems of the Committee and matters of insurance and discussed many of the cases that were now on the Committee's docket. There were many questions asked and a general discussion ensued, after which the report was referred to the Committee on County Societies.

12. Dr. Fensch, member of the State Committee on Crippled Children, addressed the Council upon his problems and the problems of the committee and requested guiding advice. The questions presented by Dr. Fensch were referred to the Committee on County Societies.

13. The Council adjourned at 5:50 P. M.

Following adjournment the Council was the guest of the Wayne County Medical Society for dinner at their Society Headquarters, and following the dinner the Council joined with the Wayne County Medical Society in its regular weekly meeting. The Wayne County meeting was addressed by President Le Fevre, President-Elect Smith, Chairman Corbus and the Secretary.

Second Session

The Council convened in second session in the Statler Hotel at 9:00 A. M., January 16, 1934.

With the Chairman presiding the following Councillors were present—Corbus, Cummings, Perry, Hafford, McIntyre, Powers, Van Leuven, Brunk, Heavenrich, Boys, Treynor, Urmston, Cook, Carstens and Manthei. There were also present President Le Fevre, President-Elect Smith, Editor Dempster, Treasurer Hyland and the Secretary.

14. The following report of the Publication Committee was presented:

REPORT OF PUBLICATION COMMITTEE

As your temporary chairman I wish to report the actions of the Publication Committee for the year 1933.

I wish to state first that the organization has lost a most valuable servant in Dr. Bruce, and I sense the loss to the Publication Committee when I scan over the reports of this committee for the past few years. The Society and Council owe him a deep debt of gratitude for the service he has given.

One formal meeting of the committee was held in Detroit at which time Doctors Dempster and Brunk sought to instruct and acquaint me with the problems and policies of the JOURNAL. At this meeting I expressed the thought that inasmuch as medical men throughout the country and particularly in Michigan are intensely interested in economic questions, that we devote more space to articles of that nature. I still am of that opinion and would suggest that our profession be solicited for proper articles discussing economic problems.

The question of a change in publisher was discussed early in the year. We think it best to continue with the present publisher, who has been kind and generous and who has given us highly satisfactory service.

It has come to our attention that book publishers will no longer extend their advertising in State Journals. In this connection it is pointed out that if State Journal publishers would not give an extended review of medical books, these book publishers would possibly be forced to advertise again in our JOURNAL. This problem I think is one which merits discussion. I wish to compliment Doctor Dempster on the very fine JOURNAL he edits. Our JOURNAL stands high in America. Its fineness in every department stands as a compliment to him.

We wish to pay our respects to our secretary for his great ability in procuring for the JOURNAL the advertising necessary for its continued existence as a worth-while publication.

Respectfully submitted,
A. S. BRUNK,
FREDERICK A. BAKER.

Upon motion of Powers-Cummings, after a discussion of the report, it was directed that the Publication Committee should exercise great care in publishing contributed articles on economic problems in the JOURNAL.

Upon motion of Cummings-Powers the report of the Publication Committee was adopted.

15. The report of the Committee on County Societies, which was read by Doctor Treynor, section by section, at the request of the Chairman of the Committee, C. E. Boys, follows:

We would recommend adoption of changes as suggested for annual meeting, especially as relates to elimination of evening meeting.

As regards facilities for post graduate study, we feel that this feature should receive further emphasis to the membership as of vital importance to the practitioners of the state. We commend Doctor Bruce for his efforts in this connection and urge that he continue to expand these facilities as rapidly as possible.

We urgently recommend the renewal of Councilor district meetings as soon as finances permit.

We recommend the continuance of annual conference of County Secretaries and that actual expenses be paid as in the past.

We recommend the adoption of the report as a whole and commend the Secretary on the form and thoroughness of same.

REPORT OF MEDICO-LEGAL COMMITTEE

We recommend the adoption of the report of Doctor Stapleton's committee as a whole.

INDEMNITY INSURANCE

Your Committee feels that indemnity insurance should remain an individual or county concern and therefore have no recommendations to offer, feeling that it is outside the function of the State Society to foster any particular plan of insurance.

The Committee unanimously endorses the continuance of our present plan of medico-legal defense.

ECONOMICS COMMITTEE

We commend the adoption of the report as read.

JOINT COMMITTEE ON HEALTH EDUCATION

We recommend that some official acknowledgment of appreciation should emanate from the Council to Mr. McGregor for making the continuation of the Survey possible and to Dr. Bruce for his efforts in obtaining this aid.

REPORT OF LEGISLATIVE COMMITTEE

We endorse the remarks made by the Chairman relative to the plan of closer liaison with County Society Committees.

CRIPPLED CHILDREN'S COMMISSION

It is the belief of this Committee that the physicians of the Upper Peninsula desire the services of an orthopedic surgeon for the Upper Peninsula and that a substantial saving could be made to the state by establishing this service.

We recommend that this position shall be handled on a fee basis as is done elsewhere in Michigan rather than on a fixed salary basis.

We solicit the discussion of the Council as regards the method of making appointment to this position.

CANCER COMMITTEE

Request for funds of mailing expense.

COUNCIL ACTION

The following actions were taken and motions made during the consideration of the Committee's report:

a. It was moved by Councilors Cook-McIntyre that it was consensus of the Council that renewed activity be featured in the conducting of councilor district Post Graduate Conferences. That the supervision and direction and the formulation of the programs for these Post Graduate Conferences be delegated to the Secretary and the Chairman of the Council's Committee on County Societies.

b. It was moved by Cook-McIntyre that no honorarium per diem be allowed to speakers participating in these Conferences unless they are required to spend more than one day in fulfilling their engagement and that then an honorarium should be paid only for one day.

c. It was moved by Heavenrich-Urmston that when an honorarium for a speaker was to be paid, that the sum be limited to $25.00.

d. It was moved by Treynor-Van Leuven that steps be taken towards encouraging these conferences at an early date.

e. It was moved by McIntyre-Urmston that the Chairman of the Council's Committee on County Societies and the Secretary be authorized to coöperate with the Director of the Department of Post Graduate of Medicine of the University of Michigan for the purpose of accomplishing a continuation and extension of Post Graduate Courses and that these two representatives confer with Doctor Bruce for that purpose.

f. On motion of Perry-Hafford the report of the Joint Committee on Public Health Education was accepted and that the Society's representatives on the Joint Committee be directed to support the plan of county activities and urge its active promotion in every county.

g. Councilors voiced sincere appreciation for the contribution of $7,500.00 made by Mr. Tracey W. McGregor to defray expenses of the work of our Committee on Economics and for the efforts reflected by Doctor Bruce in securing this contribution. Upon motion of Carstens-McIntyre the Secretary was directed to send to Mr. McGregor and to Doctor Bruce an expression of the Council's appreciation and thanks.

h. Upon motion of Cook-McIntyre the Secretary was directed to address a communication to all officers of the Society and to all chairmen and members of Society Committees calling to their attention the provisions of our By-Laws in regard to the publication of interviews, the imparting of information and the release of reports before official action had been reported by the House of Delegates or the Council when acting in behalf of the House of Delegates and to urge that strict compliance with an adherence to these provisions be featured in all matters pertaining to organizational activities or organizational problems.

i. Upon recommendation of President-Elect Smith and by motion of Councilors Heavenrich-McIntyre the Secretary was directed to transmit the foregoing action in a week-end table to our commission that is now in England.

j. There was a prolonged discussion upon the questions raised by the Crippled Children's Commission. It was evidenced that there was need in the Upper Peninsula for a competent and adequately trained orthopedic surgeon and that such a man was not at present available from among the profession of the Upper Peninsula. It was further represented that the local pro-

fession of the Upper Peninsula would welcome an orthopedic surgeon under certain limitations and conditions. It was further demonstrated that there were not a sufficient number of orthopedic cases in the Upper Peninsula to support an independent orthopedic man. It was further imparted that the expenses placed upon counties for sending in cases to the Lower Peninsula were excessive. It was also revealed that the profession of the Upper Peninsula would welcome the educational and training benefit that would come to them by having a qualified orthopedic surgeon located in the Upper Peninsula.

Upon motion of Manthei-McIntyre the Council endorsed the plan of a full time orthopedic surgeon for the Upper Peninsula provided he was employed by the Commission under the same terms that govern the present full time pediatrician who is now a resident in the Upper Peninsula under the supervision of the Medical Department of the University of Michigan and that his teaching and consulting activities be under such control and in agreement with the wishes and actions of the officers of the Upper Peninsula's Medical Society.

k. Upon motion of Boys-Cook the Council referred back to the Crippled Children's Commission the problem of fee schedule.

l. Upon motion of Van Leuven-Perry the problem of tubercular child was discussed and the Council recommended that only the tubercular child with orthopedic complications should become a ward of the Crippled Children's Commission and that the tubercular child with non-orthopedic complications be continued under the present arrangements and care of the tuberculosis organizations.

16. Upon motion of Boys-Treynor the report of the Council's Committee on County Society activities was adopted as read and amended by the foregoing motions.

17. The Finance Committee's Report was as follows:

a. That the financial report of the Secretary, accompanied by the auditor's report, be adopted.

b. The Council devoted much time to the discussion of the budget for 1934.

c. Upon motion of McIntyre-Urmston the dues for 1934 were placed at $8.50 per member.

d. Upon motion of Powers-Brunk the following budget for 1934 was adopted:

Income

3,200 Members @ $8.50	$27,200.00	
Interest	1,200.00	
		$28,400.00

Appropriations

Defense Fund $1.00	$ 3,200.00	
Journal Subscriptions $1.50	4,800.00	
Rent, Phone and Light	1,400.00	
Annual Meeting	750.00	
Post Graduate Conferences	750.00	
Committee Expenses	500.00	
Legislative Committee	1,500.00	
Council Expense	1,200.00	
Postage	450.00	
A. M. A. Delegates	300.00	
Stenographic	2,500.00	
Society Expense	1,500.00	
Secretary	4,000.00	
Notes Payable	2,500.00	
Committee Reserve	400.00	
Economics Committee	500.00	
Contingent Fund	2,150.00	
		$28,400.00

Journal Budget

Income

Advertising	$ 6,000.00	
Subscriptions	4,800.00	
		$10,800.00

Expenses

Printing	$ 7,000.00	
Editor	2,250.00	
Editor's Expenses	500.00	
Reserve	1,050.00	
		$10,800.00

e. The Council considered the budget presented by the Economics Committee. The Secretary was directed to return to the Economics Committee this budget with the request that it be reviewed and presented to the Executive Committee at its next meeting.

f. Upon motion of Urmston-Heavenrich, the Committee on Economics was requested that when it reviews its budget it give consideration and include an honorarium for Doctor Luce for the purpose of compensating him for fixed expenses that continued during his absence.

g. Upon motion of Boys-Carstens the request of the Cancer Committee for a postage appropriation was approved.

h. Upon motion of Perry-Hafford the Treasurer's report was adopted.

i. Upon motion of Heavenrich-Cummings the Secretary's salary was continued at $4,000.

j. Upon motion of Cook-McIntyre the Editor's salary was fixed at $2,250 and an allowance of $500 for postage and stenographic services was made.

k. Upon motion of Carstens-Van Leuven the report of the Finance Committee with the foregoing comments and actions was adopted.

ANNUAL MEETING

18. Upon motion of Boys-Manthei the dates for the 1934 Annual Meeting in Battle Creek were fixed as September 12, 13 and 14.

ELECTIONS

19a. Upon motion of McIntyre, supported by many, F. C. Warnshuis was unanimously elected as Secretary for the ensuing year.

b. Upon motion of McIntyre-Heavenrich, J. H. Dempster was unanimously elected Editor for the ensuing year.

c. Upon motion of Perry-Van Leuven, Wm. A. Hyland was elected Treasurer for the ensuing year.

d. Upon motion of Hafford-Cummings, the election of members to constitute the

Medico-Legal Committee was referred to the Executive Committee of the Council with power to act.

20. Upon motion of Hafford-Treynor, the question of employing reporters for the scientific sections was referred to the Executive Committee of the Council with power to act.

No further business being introduced and there being no further business to come before the Council, the Council adjourned upon motion of Van Leuven-Powers.

(Signed) F. C. WARNSHUIS,
Secretary.

COUNTY SOCIETIES

BAY COUNTY

The annual meeting of the Bay County Society was held Wednesday evening, December 13, 1933, at the Hotel Wenonah. Retiring President Huckins called the meeting to order with forty-seven members present. As has been the custom in Bay County for many years, the members were the guests of President Huckins at a full-course turkey dinner.

The program of the evening was featured by the address of Dr. George LeFevre, President of the Michigan State Medical Society.

The annual report of the Secretary-Treasurer was made and accepted, as were the reports of the standing committees.

Officers were elected for 1934 as follows:

President, Dr. J. H. McEwan; president-elect, Dr. S. L. Ballard; secretary-treasurer, Dr. L. Fernald Foster; censors, Doctors R. N. Sherman, A. W. Herrick, V. H. Dumond; medico-legal officer, Dr. A. W. Herrick; permanent delegate, Dr. L. Fernald Foster; alternate delegate, Dr. E. S. Huckins.

Committee appointments are as follows:

Executive Committee.—Dr. J. H. McEwan, chairman; Dr. S. L. Ballard, Dr. L. F. Foster, Dr. P. R. Urmston, Dr. R. N. Sherman, Dr. M. R. Slattery, Dr. C. S. Tarter, Dr. E. S. Huckins, and Dr. V. H. Dumond.

Public Relations Committee.—Dr. R. C. Perkins, chairman; Dr. P. R. Urmston, Dr. E. C. Miller, Dr. P. R. Urmston, *ex-officio,* and Dr. L. F. Foster, *ex-officio.*

Legislative Committee.—Dr. J. C. Grosjean, chairman; Dr. R. C. Perkins, Dr. M. R. Slattery, Dr. S. L. Ballard, Dr. J. H. McEwan, Dr. P. R. Urmston, *ex-officio,* and Dr. L. F. Foster, *ex-fficio.*

Preventive Medicine Committee.—Dr. C. S. Tarter, chairman; Dr. W. G. Gamble, Dr. P. R. Urmston, *ex-officio,* and Dr. L. F. Foster, *ex-officio.*

Women's Auxiliary Committee.—Dr. L. F. Foster, chairman; Dr. J. W. Gustin, Dr. G. W. Brown, and Dr. P. R. Urmston, *ex-officio.*

The retiring president, Dr. Huckins, addressed the members on various subjects of society activities and solicited the same earnest coöperation for his successor.

The society adjourned to the home of Dr. Huckins, where "open house," including a buffet luncheon and cards, followed until the early hours of December 14.

L. FERNALD FOSTER, *Secretary.*

DELTA COUNTY

The annual meeting of the Delta County Medical Society was held at St. Francis Hospital, Escanaba, Michigan, at 5:00 P. M., December 7, 1933.

The following officers were elected for the ensuing year: President, Dr. A. J. Carlton; vice president, Dr. G. W. Moll; secretary-treasurer, Dr. W. A. Corcoran; trustee, Dr. A. S. Kitchen; medico-legal adviser, Dr. D. N. Kee; delegate to State Society, Dr. J. J. Walch; alternate, Dr. J. W. Towey.

After the business meeting a banquet was served by the Sisters of St. Francis, the piece de resistance being pheasant, which was generously provided by Dr. A. S. Kitchen.

W. A. CORCORAN, *Secretary.*

HILLSDALE COUNTY

The annual meeting of the Hillsdale County Medical Society was held at the Keefer House in Hillsdale on Wednesday, December 6, 1933, beginning with a dinner at 6:45 P. M., the president, Dr. Mattson, presiding.

The minutes of the last annual meeting were read and, as corrected, approved.

The treasurer's report was read and accepted.

Dr. Green, chairman of the committee appointed to confer with the Board of County Supervisors as to the care of the indigent, reported.

The Medical Service under the Emergency Welfare Relief and the plan of the State Emergency Welfare Commission were discussed. It was voted to give full coöperation with County Welfare plans for care of the indigent and the fee bill as presented by Dr. Mattson was accepted and adopted. Drs. H. F. Mattson, Luther Day, D. W. Fenton and G. W. Hanke were appointed as an advisory committee to confer with the County Welfare Commission.

It was moved, seconded and carried "That the 'Copeland Bill' be approved and the approval be put in the form of a resolution by the secretary and a copy of said resolution sent to our representative in Congress and to each of our senators from this state." A copy of the resolution is attached to this report.

Dr. Martindale gave a report as delegate to the State Medical Society.

It was moved, seconded and carried that the Hillsdale County Medical Society join the societies of Branch and St. Joseph Counties in their meetings during the ensuing year, and in addition hold its own regular quarterly meetings as heretofore.

The Society then proceeded to the election of officers for the year 1934, resulting in the retention of the present corps of officers for another year: Dr. H. F. Mattson, president; Dr. L. W. Day, vice president; Dr. D. W. Fenton, secretary-treasurer; delegate to the State Society, Dr. C. J. Poppen; Dr. B. F. Green, alternate.

D. W. FENTON, *Secretary.*

JACKSON COUNTY

The business meeting of the Jackson County Medical Society for December was held at Foote Memorial Hospital, Tuesday afternoon, December 12, at 4:30 p. m. After the minutes of the preceding meeting were read and approved, Dr. Ransom gave the treasurer's report. This was audited by Doctors Hungerford and O'Meara and approved. Dr. John Smith gave a brief report of the meetings of the board of directors for the year 1933.

The society then proceeded to the election of officers for the coming year. Dr. Clyde A. Leon-

ard, president-elect in 1933, automatically became president. Dr. John E. Ludwick was elected president-elect, Dr. R. H. Alter, secretary; Dr. F. G. Ransom, treasurer, and Doctors Don F. Kudner, E. D. Crowley and E. O. Leahy were elected members of the board of directors. Doctors Philip Riley and J. J. O'Meara were re-elected delegates to the state convention with Doctors Corwin S. Clarke and H. A. Brown as alternates. Dr. Leonard, following the precedent of preceding years, was named to act as the representative of the medical society at the Board of Commerce meetings. Dr. H. W. Porter was elected editor of the monthly *Bulletin*.

The application of Dr. F. J. Caldeira to become a member of the society was laid on the table until the truth of a rumor that he was leaving the city to enter the South American diplomatic service was verified. The applications of Dr. John Page and Dr. John W. Rice having been passed by the board of directors were voted on and passed, while the application of Dr. N. D. Wilson was rejected. The name of Dr. C. E. Tate of Vandercock Lake was reported out of the board and will be acted upon at the January meeting.

The matter of a pension fund of the society was brought up by Dr. Riley and seconded by Dr. Crowley with the provision that the board of directors for 1934 set the amount at their first meeting. This was carried unanimously.

The new officers were installed at a dinner party held on Thursday evening, December 14, at the Hayes Hotel. The speaker of the evening was Dr. Gus Dwyer, professor of Economics at Vanderbilt University. This talk was on economic conditions and was both amusing and instructive. Dancing followed as the other entertainment for the evening with music by Dr. Strong's orchestra.

R. H. ALTER, *Secretary.*

LIVINGSTON COUNTY

The Society met at the State Sanatorium on Friday evening, January 5, 1934. Following a dinner, we had the great pleasure of listening to Dr. William J. Cassidy, of Detroit, give an illustrated talk on "The More Common Diseases of the Urinary Tract and Their Surgical Treatment." Dr. Cassidy, in his usual capable manner, gave a thorough presentation of the subject, discussing the pathology with relation to symptomatology as a basis for rational therapy.

A short business meeting followed, and minutes of the December and November, 1933, meetings were read. No formal action was taken on any matter of importance. However, considerable discussion took place as to ways and means of arousing a more active interest on the part of a certain percentage of the membership who have been particularly careless in the matter of attendance. This is always an ever present problem among the smaller societies in Michigan as elsewhere. There were present but twelve members and five guests.

R. S. ANDERSON, *Secretary.*

MENOMINEE COUNTY

At our regular January meeting the following officers were elected: President, Dr. Ed. Sawbridge, Stephenson; vice president, Dr. J. T. Kaye, Menominee; secretary-treasurer, Dr. W. S. Jones, Menomonie.

The following committees were appointed:

Legislative.—Dr. E. V. McComb, Dr. J. T. Kaye, and Dr. A. R. Peterson Daggett, all of Menomonie.

Economics.—Dr. H. T. Sethney, Dr. S. C. Mason, and Dr. J. T. Kaye, all of Menomonie.

Program.—Dr. E. Sawbridge, Stephenson; Dr. J. T. Kaye, Menominee, and Dr. W. S. Jones, Menominee.

At this meeting our Society went on record as willing to serve with the Emergency Welfare Relief Commissions for $1.50 for house call and three-fifths of regular County Medical Society fee schedule.

M. S. JONES, *Secretary.*

MIDLAND COUNTY

On January 12, 1934, eight members of Midland County Medical Society held a meeting at the Country Club.

Officers for the year 1934 are: President, J. H. Sherk; secretary, E. J. Dougher.

Minutes of the previous meeting were read and approved.

Motion was made by C. V. High, Sr., and seconded by C. V. High, Jr., that we offer our protest against osteopaths receiving full State Emergency Welfare Relief. Carried.

Motion was made by Dr. Sherk and seconded by Dr. High, Sr., that we meet regularly at the Country Club on the second Friday of every month. Carried. Some one doctor will have a special subject for the meeting.

E. J. DOUGHER, *Secretary.*

MUSKEGON COUNTY

The annual meeting of the Muskegon County Medical Society was held December 8, 1933, at the Muskegon County Tuberculosis Sanitarium. Following dinner, the meeting was opened by Dr. Douglas, president.

Dr. Charles William Peers, of Holton, and Dr. Frank Diskin, of Muskegon, were elected to membership in the Muskegon County Medical Society. The report of the secretary and treasurer for 1933 was read and accepted. Dr. William LeFevre gave the report of the Public Relations Committee. The committee was asked to make the most favorable agreement possible and report at the next meeting.

The following officers were elected: President, Dr. V. S. Laurin; vice president, Dr. Harold Closz; secretary-treasurer, Dr. F. W. Garber, Jr.; delegate to state convention, Dr. R. H. Holmes; alternate, Dr. F. W. Garber; medico-legal adviser, Dr. Geo. L. LeFevre.

Dr. Laurin assumed the chair and acknowledged his election. Dr. Holmes recommended that the Society publish a bulletin covering its activities. A motion was passed that a committee be appointed to investigate and report back to the Society as to costs, etc.

A rising vote of thanks was tendered to Dr. Bartlett for his hospitality and the meeting adjourned.

F. W. GARBER, JR., *Secretary.*

NORTHERN MICHIGAN

The regular meeting of the Northern Michigan Medical Society was held at the Hotel Perry, Petoskey, January 11, 1934. The business of the evening was preceded by an excellent steak dinner. There were twenty members and two guests present. The meeting was called to order by Vice President Larsen. Minutes of the last meeting were read and approved. Correspondence was read.

The regular business of the evening was then omitted and the program turned over to the Program Committee. Doctor Conway then introduced Dr. I. H. Chilcott of Chicago, chief of staff, St. Francis Hospital. Doctor Chilcott then gave a very

interesting talk on "Venoclysis." He went into excellent detail in regard to all the various conditions, solutions, equipment and counter-indications for which this form of therapy might be used. The talk was very well given and enjoyed by all those present.

Dr. Wesley Mast was appointed to the Program Committee for next month.

E. J. BRENNER, *Secretary.*

SAINT CLAIR COUNTY

The annual meeting of Saint Clair County Medical Society was held at Port Huron Hospital, Port Huron, Michigan, Tuesday, December 19, 1933. Supper was served to twenty-one members at 6:30 P. M. The meeting was called to order by President D. J. McColl at 7:15 P. M. with twenty-five members and one guest present.

By direction of the president the reading of minutes was dispensed with to save time. Communications were read. The letter of the state secretary dated November 22, 1933, including the data pertaining to medical services under welfare relief was read by the secretary. The election of officers for the year of 1934 followed. Dr. A. B. Armsbury was elected president; Dr. J. H. Burley, vice president; Dr. G. M. Kesl, secretary-treasurer; Dr. A. L. Callery and Dr. T. E. DeGurse were reëlected delegate and alternate, respectively, to the State Society, and the censors, Drs. A. J. MacKenzie, J. A. Attridge and E. W. Meredith, were elected for another year.

President McColl stated the Metropolitan Life Insurance Company, through its field representative, desired the Society to express an opinion as to the desirability of their nurse in this community attempting both non-communicable and communicable work at the same time. Dr. A. L. Callery, health officer of Port Huron, stated that he felt it unwise to do so. A motion was made, supported and carried instructing the secretary to address a letter to the company advising against a nurse attempting to care for communicable cases.

Dr. Heavenrich stated a recent decision of the Michigan Attorney-General anent fees allowed physicians for caring for afflicted adults. Doctor Patterson, chairman of the Committee for the Medical Care of the Indigent, reported a meeting to be held next Thursday, December 21, 1933, at the Hotel Harrington, Port Huron, Michigan, at which time the chairman of the Michigan Crippled Children's Commission would be present along with his committee and the Judge of Probate. All physicians interested were invited to attend at their own expense. Some plan of action was to be worked out if same was possible, for the care of afflicted minors at the local hospital.

President McColl informed the Society relative to the present status of medical care of afflicted and crippled minors in the community and also relative to Medical Welfare Emergency Relief. Dr. Waters and Dr. Burley reported such information as they were able to gather from twenty-six counties with regard to the plan of Welfare Emergency Relief in those counties. It seemed from this information that twenty-two of the twenty-six had some sort of arrangement now in force, the majority following the plan laid down by the State Society under date of November 22, 1933.

The secretary read the signed agreement of some of the members of the Society in which a pledge was made not to do Federal Emergency Relief until their Society approved of and entered into an agreement with the County Welfare Emergency Relief Commission. Dr. Cooper arose to explain why he hadn't signed the pledge. Dr. Callery spoke about his views on the legality of the employment of a county physician to care for only a small part of the county. Dr. DeGurse and Dr. Johnson reported as to the fees they had received from the county for the care of medical indigents in their respective portions of the county.

Mr. Glassford and Mr. Rankin of the County Welfare Emergency Relief Commission were introduced to the Society by President McColl.

Dr. Waters read a brief summary of what had been accomplished in twenty-odd counties of Michigan with regard to Welfare Emergency Relief from a medical standpoint. Mr. Glassford arose and stated that he and Mr. Rankin were both willing to effect any possible arrangement for the medical care of the indigent insofar as was permissible under existing rules.

Dr. Heavenrich spoke of conditions in this locality and stated that all physicians of the county had been doing emergency relief during the past few years absolutely without any remuneration and that he believed inasmuch as the Federal Government had appropriated funds that the physicians of Saint Clair County should be given their share.

The secretary reread a portion of the instructions from the State Society, under date of November 22, concerning the agreement as to the medical welfare relief consummated at Lansing on November 21. Dr. McColl stated his views on medical relief and Mr. Glassford arose to state that he was informed that existing county physicians could not be discontinued without imperiling all relief the Federal Government was extending the county at the present time. He wished to make it clear that he, personally, was sympathetic with the medical profession and that he knew they were entitled to remuneration for their services. He felt he was more or less restricted, however, by regulations from State Headquarters.

A motion by Dr. Burley, supported by Dr. Heavenrich, was carried to the effect that the president appoint a committee of three to confer with Mr. Glassford and Mr. Rankin, with full power to act to effect some agreement for medical fees for the care of the indigent.

Mr. Glassford complimented Dr. LeGalley, county physician, on the splendid work and effort the latter was making at present to care for indigents requiring medical aid. Doctors Patterson, Callery and Cooper spoke of the huge volume of such work at the present and all stated that Dr. LeGalley could not possibly render adequate medical care to such a large number of patients. Mr. Rankin spoke of difficulties anent the authorization of medical care. He stated some sort of arrangement would have to be worked out. Dr. Waters read the plan of authorization now in effect in Wayne County.

President McColl called upon Vice President-Elect Dr. J. H. Burley, who thanked the Society for the honor conferred upon him and pledged himself to work for the good of the Society. Dr. DeGurse arose to say a few words in compliment to both Mr. Glassford and Mr. Rankin and stated that he felt both officials would be fair to both physician and citizen in handling welfare relief.

Dr. McColl, retiring president, said a few words in appreciation of the support the members of the Society had given to him during the past year and also that it had been a pleasure to serve as president. Dr. McColl then introduced President-Elect Dr. A. B. Armsbury, who thanked the Society for the honor conferred upon him and asked the support and coöperation of all members during the coming year. Dr. Armsbury then appointed a committee consisting of Drs. Waters, Patterson and Burley to confer with Mr. Glassford and Mr. Ran-

kin as authorized by the motion referred to above.

A rising vote of thanks was given to Mr. Glassford and Mr. Rankin by the Society for their spirit of coöperation in attending the meeting.

Doctor Heavenrich arose to state that the Society was breaking the law and assisting the hospital in breaking the law in giving supper to the Medical Society and stated three directors of the N. R. A. had spoken to him as local chairman of the Port Huron N. R. A. about the matter of receiving complaints from local restaurant owners concerning the same. He made a motion, supported by Dr. De Gurse, that future meetings of the Society be held at the Hotel Harrington. This motion was carried without a record vote. Meeting adjourned at 9:30 P. M.

GEORGE M. KESL, *Secretary-Treasurer.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. ELMER L. WHITNEY, President
18224 Wildemere Ave., Detroit
MRS. C. L. STRAITH, Secretary-Treasurer
19305 Berkley Road, Detroit

The following is a message to the Woman's Auxiliary to the Michigan State Medical Society from the Advisory Council, Dr. Theo. Heavenrich, Port Huron, Mich.

"My message is a wish that your future years will be productive of as much good as the past years have been under the able leadership of your past presidents.

"In my rambles about the state, and in my own home county I find that many think your organization is one for social endeavor only. Knowing what you have accomplished, I can subscribe to the statement that this is absolutely wrong. That you have done much and are doing more, is the true light in the matter, and with this knowledge I am urging your members to foster diligent work in those counties as yet unorganized. I have noticed that in the counties where you have units there is closer and more cordial coöperation of the doctors' wives than elsewhere."

BAY COUNTY

At the December meeting of the Woman's Auxiliary to the Bay County Medical Society, the following officers were elected: President, Mrs. C. M. Swantek; first vice president, Mrs. L. F. Foster; second vice president, Mrs. M. R. Slattery; secretary, Mrs. A. L. Ziliack; treasurer, Mrs. H. M. Gale; corresponding secretary, Mrs. E. C. Miller. The committee chairmen are as follows: Program, Miss Marian Moore; Hospitality, Mrs. Walter Stinson; Telephone, Mrs. Kenneth Stuart; Publicity, Mrs. E. C. Miller.

The above officers were elected to hold office until May, 1935, in this way coinciding with the election of the other counties in the state.

(Mrs. E. C.) JOSEPHINE S. MILLER, *Publicity Chairman.*

CALHOUN COUNTY

For many years it has been the custom of the Calhoun County Medical Society to entertain their wives at a dinner and entertainment on the occasion of their annual meeting in December. This year the dinner was given at the new Kellogg Hotel and was a decided success from every viewpoint.

There were over one hundred reservations and more came in for the program which followed the dinner. There was music by the Kellogg Saxophone Orchestra; a short talk by Mrs. M. G. Capron, president of the Auxiliary, on the work accomplished during the year; a sketch by Dr. Wilfred Haughey on the early beginning and continued activities of the Calhoun County Society containing valuable historical information and many interesting sidelights; and a delightful hour with Mr. Harry Cecil, of Detroit, sleight of hand performer.

Dr. Carl G. Wencke presided and Dr. Harry G. Knapp was program chairman.

The Auxiliary put on its annual rummage sale in November with Mrs. Mustard and a capable committee in charge. With rummage scarce and prices unusually low, ninety dollars was taken in. This money is to be used to further the welfare work which the society has undertaken.

Mrs. H. M. Lowe has called together one group of the Auxiliary to make up another lot of maternity kits for indigent expectant mothers. The kits contain the absolute necessities for mother and baby at the time of confinement and also a few things which make the doctor's work easier and safer. They were made in the beginning at the suggestion of the nurses who are familiar with this phase of welfare work and its needs, and have proved to be nothing short of a godsend to all concerned.

Tentative plans are already being made for the entertainment of the State Auxiliary here next fall. It is the ambition of the local society to make the social as well as the business part of the meeting something to be remembered.

(Mrs. W. H.) EDITH COWLES HAUGHEY, *Publicity Chairman.*

INGHAM COUNTY

The fall activities of the Woman's Auxiliary to the Ingham County Medical Society were started in October with a reception and tea at the home of the president, Mrs. D. A. Galbraith. Also, in October, sewing was done at the hospitals by members of the organization.

In November, a Thanksgiving bridge luncheon and shower of fruits, jellies and vegetables was held at the East Lansing home of Mrs. John Wetzel. The donations were divided and taken to the various hospitals.

A Christmas party was given in December for the children of the members at which the guests were entertained with moving pictures. The Christmas tree and gifts were afterward taken to the children in the city hospital.

The officers this year are: President, Mrs. D. A. Galbraith; vice president, Mrs. John Rulison; secretary and treasurer, Mrs. George Bauch.

The membership of the Auxiliary is ninety.

(Mrs. D. M.) MILDRED SNELL, *Publicity Chairman.*

OAKLAND COUNTY

On December 20, 1933, the Woman's Auxiliary to the Oakland County Medical Society entertained the Oakland County Medical Society at a Christmas party. About fifty guests enjoyed the beautifully decorated ball room of the Casa del Rey in Pontiac. Santa Claus distributed gifts from a large Christmas tree. Miss Betty Fiske gave several lovely dancing numbers. After dancing and bridge, a box lunch added merriment to the occasion.

The next Auxiliary meeting will be held on January 26, 1934.

(Mrs. R. H.) HELEN C. BAKER, *Publicity Chairman.*

KALAMAZOO COUNTY

The first fall meeting of the Kalamazoo Woman's Auxiliary was held on November 21, 1933, with thirty-one members present. An evening of social fellowship was enjoyed.

The officers are: President, Mrs. R. J. Hubbell; president-elect, Mrs. C. L. Bennett; first vice president, Mrs. W. W. Lang; second vice president, Mrs. C. B. Fulkerson; secretary and treasurer, Mrs. H. H. Stryker.

On December 19, the Auxiliary members were guests of their husbands at a dinner meeting of the Academy of Medicine followed by an excellent program at which Dr. Warnshuis, secretary of the State Medical Society, and Dr. Ernest Harper, local director of Welfare activities, were the speakers. Places were laid for 125.

(Mrs. C. B.) CORA KIER FULKERSON, *Publicity Chairman.*

SAGINAW COUNTY

The Woman's Auxiliary to the Saginaw County Medical Society held its annual meeting December 19, 1933, at Adam's Inn, Saginaw, with thirty-six members present. Dinner was served at 6:30, the tables being decorated with Christmas greens and red candles, after which a business meeting and election of officers was held, the president, Mrs. L. A. Campbell, presiding. Reports were given by the various officers and committee chairmen. Announcement was made of the appointment of Mrs. L. C. Harvie as publicity chairman to the Michigan State Medical Society.

We found in the reports that a great deal had been accomplished during the year. We had made over 200 new garments for the Saginaw hospitals and mended about fifty. We had held a subscription bridge dinner, the proceeds of which were used to purchase Hygeia for nearby rural schools. We had a talk by our Saginaw County Medical Society president, Dr. F. J. Cady, at one of our meetings, and our State Auxiliary president visited us at a meeting early in the year. A better spirit of friendliness had been established among our thirty-five to forty members. We had 100 per cent attendance at November and December meetings. At the request of our State president we voted to have our annual meeting in May in the future.

The election of officers resulted in the following: Presi-

dent, Mrs. J. A. McLandress; vice president, Mrs. Walter Slack, secretary, Mrs. M. G. Butler; treasurer, Mrs. Herbert Kleekamp.

The following committee chairmen were appointed: Public Relations, Mrs. W. H. Pickett; Hygeia, Mrs. J. H. Powers; Legislative, Mrs. F. J. Cady; Flower and Sick, Mrs. H. J. Meyer; Membership, Mrs. W. K. Anderson; Custodian, Mrs. L. A. Campbell; Entertainment and Publicity, Mrs. Robert Jaenichen.

After the business meeting, bridge was played, prizes being awarded to Mrs. Dale Thomas, Mrs. S. A. Sheldon and Mrs. Frank Poole.

Out of town members present were Mrs. John Maurer, of Reese, Mrs. Ostrander, of Freeland, Mrs. Sarles and Mrs. Kauffeld, of Frankenmuth.

(Mrs. J. A.) ZUELA B. MCLANDRESS, *Publicity Chairman.*

WAYNE COUNTY

The activities of the Woman's Auxiliary to the Wayne County Medical Society in 1934 followed as close upon the heels of the old year as possible, as the board meeting was held in the club house on January 2.

Tuesday, January 9, saw the fulfillment of a long anticipated event, for on that day Malcolm Bingay, prominent newspaper man and honorary member of the Wayne County Medical Society, was guest speaker at the regular monthly meeting. His subject was, "The World's Neurosis." Dr. Alexander W. Blain, president of the Wayne County Medical Society, introduced the speaker.

The business meeting was followed by music, and after tea a what-not and bake sale was held. Mrs. Chas. D. Toole, Mrs. G. B. Ohmart, Mrs. Clarence E. Weaver, and Mrs. Leon H. Hirsch were hostesses on this occasion.

Before the holidays (on December 13) a luncheon was given by the Fort Shelby Hotel in connection with the J. L. Hudson Co. exhibit of "The Doctor." The guests included some members of the Wayne County Medical Society and its Auxiliary. Among those present were Dr. Alexander W. Blain, president of the society, and Mrs. Blain; Dr. Claire L. Straith, and Mrs. Straith, president of the Woman's Auxiliary; Mrs. Frank W. Hartman, vice president of the same organization; Dr. and Mrs. A. O. Brown; Miss Nellie B. Christian, superintendent of the District Nurses' Association; and Miss Alice Guysi, supervisor of art in the Detroit public schools.

Miss Retta Clark, of Toledo, grand-niece of Sir James Clark, the physician in the picture, and Mr. John Paulding, sculptor of the three-dimensional version, were the honor guests. This life-sized sculpticolor is the property of the Petrolagar Laboratories of Chicago and was brought to Detroit from the World's Fair.

After the luncheon Miss Clark told some incidents in the life of her famous uncle; and Mr. Paulding told about the sculpturing of the picture.

The children's party given by the Wayne County Medical Society and the Auxiliary on December 16 proved such a success that it was followed with a 'teen-age party on Friday, December 29. This party took place in the Wayne County Medical club house between the hours of 8:30 and 11:30 in the evening. All the young folks of the membership were invited and each was privileged to bring one guest.

An orchestra furnished music for dancing, and the entertainment included a magician who provided many surprises, and a specialty dance by Frances and Georgina Merrill, daughters of Dr. and Mrs. W. O. Merrill. These young ladies are twins, and were most attractive in their extremely different costumes as they danced the "New Yorker" and "Minuet" respectively.

For some time the ladies of the Auxiliary have been looking forward to the Study Group course on Ancient Medicine under the direction of Mrs. J. Milton Robb.

The first lecture was delivered on Monday, January 13, by Dr. Lawrence Reynolds, and consisted of an outline of the period to be covered, which is medicine in the Ancient World up to the time of Harvey.

There is no charge for the course, and all doctors' wives are invited, whether they are members of the Auxiliary or not. The class will meet on six consecutive Monday evenings at 8:30 in the Wayne County Medical club house.

MRS. CLIFFORD LORANGER, *Publicity Chairman.*

GENERAL NEWS AND ANNOUNCEMENTS

President-elect R. R. Smith will spend a few weeks in Florida.

The annual meeting dates are September 12 to 14, and the place is Battle Creek.

Read the Council Minutes published in this issue and also an opinion of the Attorney General.

Your 1934 dues are payable. See your county secretary before April 1. The State dues are $8.50.

Dr. F. C. Warnshuis was the guest speaker of the Academy of Medicine of Nashville, Tenn., at its annual banquet on January 2. Dr. Warnshuis has also been invited to speak at the General Session of the California State Association on May 1.

The Beaumont Foundation Lectures for 1934 will be held under the auspices of the Wayne County Medical Society, February 19 and 20, in the auditorium of the Detroit Institute of Arts. The speaker as announced is Dr. John F. Fulton, Sterling Professor of Physiology, Yale University School of Medicine. The title of the lectures will be "Studies of the Functions of the Cerebral Cortex in Primates." A cordial invitation is extended to every member of the Michigan State Medical Society.

The program of the general meeting of the Wayne County Medical Society, January 15, consisted of addresses by President George Le Fevre; President-elect Richard Smith of the Michigan State Medical Society; Dr. Burton R. Corbus, chairman of the Council and Dr. Frederick C. Warnshuis, Secretary of the society. All four addresses are important as presenting the policy of the state society as well as the functioning of the society in carrying on the work of the organized profession. The meeting was held too late to permit the printing of the addresses in the February number of the JOURNAL. They will appear in the March issue.

The editor has been requested to draw special attention to a paper which appeared in the January number of this JOURNAL, namely that on the "Practice of Medicine in Germany," by Dr. Arthur H. Mollman of Grand Rapids. Dr. Mollman has practiced in Germany and also in Michigan. The paper describes "State Medicine" as it is practiced in Germany as viewed by Dr. Mollman.

We have received a reprint of fifty pages of an article on "The Intra-Ocular Colour-Filters of Vertebrates," which appeared in the November-December, 1933, numbers of the *British Journal of Ophthalmology.* The authors are G. L. Walls of Ann Arbor and H. D. Judd of Detroit. This work was begun under the Alfred H. Lloyd Fellowship held by Mr. Walls at the University of Michigan, 1931-1932, and completed during his time a National Research Fellowship, 1932-1933. H. D. Judd is associated in physical optics with Dr. Ralph H. Pino, Detroit.

The attention of contributors to this JOURNAL is called to the conditions under which papers are accepted for publication (see the first page of the editorial department of the JOURNAL); particular attention is directed to the requirements for illustrations. The briefer papers of merit are acceptable to this or in any other similar publication. Contributions should be limited to approximately ten pages, paper 8½x10½, which is the standard size, typewritten and double spaced. It goes without saying, "If this rule were adhered to as close as possible, a greater number of contributors might be accommodated." The cost of half-tone illustrations has been increased approximately twenty per cent because of the NRA code provisions. Authors are billed only for the actual cost price which the JOURNAL has to pay the engravers for the illustrations that accompany the papers.